THE AMERICAN WEST

THE

AMERICAN WEST

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THE AMERICAN WEST *is published quarterly (February, May, August, November) by the American West Publishing Co., 577 College Avenue, Palo Alto, California. Changes of address and communications regarding subscriptions should be sent to this address. Members of the Western History Association should address all communications to P. O. Box 6187, Washington, D.C. 20004.*

Single copies $2.00
One Year $7.00
Two Years $12.00
Three Years $17.00
(Outside U.S. $1.00 per year extra)

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THE
AMERICAN WEST

Magazine of the Western History Association

February, 1967, Volume IV, Number 1

4 **An Introduction** *by Wallace Stegner*

6 **What the Railroad Will Bring Us** *by Henry George*

10 **Epic on Glass** *by Robert Weinstein and Roger Olmsted*

24 **The Revoloidal Spindle and the Wondrous Avitor** *by T. H. Watkins*

28 **Bernalillo County** *by William Brandon*

30 **Guns of the Canadian West** *by James E. Serven*

34 **Medicine Show** *by Arrell M. Gibson*

40 **Hayden in the Badlands** *by Gilbert F. Stucker*

46 **Ballads of the Little Big Horn** *by Austin and Alta Fife*

50 **This is a National Park**

52 **The Case of the Hard-Nosed Conservationists** *by Richard Reinhardt*

55 **Diseños** *by Robert Becker*

About the Authors, p. 65; picture credits, p. 85; information about the Western History Association, p. 96

Bull Creek Flat, Humboldt Redwoods State Park.
Philip Hyde.

The aims of *The American West*, defined by Ray A. Billington in the magazine's first issue, have been illustrated and given substance in the eleven issues that appeared under the able editorship of A. R. Mortensen and C. Gregory Crampton. A new editor need only describe what he inherits, and clarify his own relationship to it.

As its name suggests, *The American West* takes a vast geographical area and several regional cultures for its province. It is a magazine written by experts but not exclusively for experts. Though it was founded as the official magazine of the Western History Association, it does not confine itself to history narrowly conceived. It does not believe that history is assembled or collected; it believes it is made, it is an artifact as surely as myth is an artifact, it results from the application of thought and emotion to recorded fact. Time is a continuum as unbroken as the scribble of a seismograph: the past ended a half second ago, present becomes past while we say the words, the future is inference and projection, not so much from what has happened as from what has been said and felt about what has happened.

Too often, the history of the West has been mined for its picturesqueness, its violence, and its color. While we would be foolish, and even historically untruthful, to ignore that color, we do not expect to specialize in it to the exclusion of other significant matters. Neither do we wish to ignore the importance of myth on the development and on the contemporary attitudes of the West. Much western happening and a constellation of western characters passed into myth before they ever had a chance to be formulated as history; and though these may be exaggerated, uncorroborated, or even historically untrue, they are not to be ignored or denied. Myth becomes history as often as history becomes myth.

If all history is process, western history is especially so. The several Wests are still forming. Most of them are areas of continuing heavy inmigration, and many of them have endured interrupted settlement—were not so much settled as raided, some of them several times, before the real communities were rooted in them and began to build permanence. A heavy proportion of westerners do not live where they were born; like other immigrants, they have broken the link with their past, they own a historical sense appropriate to another place. And those westerners who do live where they were born, who have a one-or-two-generation toehold in a place and a tradition, may be almost as cut off, for their past has not yet been adequately created for them, their identity has not formed within a known historical context. That lack may, and often does, leave them indif-

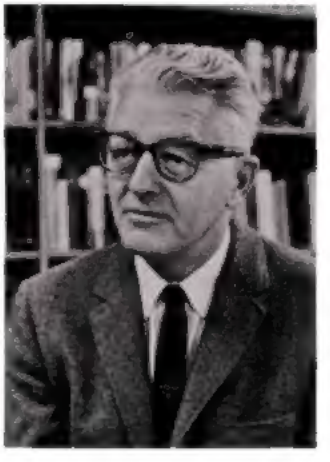
ferent as citizens and uneasy as individuals.

It is commonly noted how feeble or desperate is the community feeling in most western cities. But contrast the Mormon society of Utah, one part of the West which not only has a continuous past but has honored it, creating out of it both a history and a body of myth.

As one who grew up without history, who has had to find an orphan's place in someone else's tradition or do something about discovering and comprehending his own, I have the hope, perhaps an inflated one, that *The American West* can help a great many westerners, native and immigrant alike, locate themselves in place and time, and take their places as members of a society with a known tradition and a legitimate traditional pride.

And one thing more. Our comprehension of the peculiar western conditions, notably the condition of aridity, was gained slowly, often through disastrous mistakes. Every act of comprehension, like every mistake, helped shape what would follow. I conceive it to be a function of *The American West* to show past and present as continuous and inseparable, and that means we should deal, always within the larger historical context, with those problems of water, erosion, the conservation of soil and timber and grass, and the preservation of playground open space and the vast outdoor museums we call national parks. It means that we cannot merely present, nostalgically and with an ultimate untruth, a wilderness West that is as dead as Jedediah Smith. The American West, whatever its frontier past, is in the twentieth century increasingly urban. The western American is, by the millions, a city dweller, even if he wears boots and a Stetson and grows whiskers for Frontier Days. Seven out of eight readers of this magazine are city dwellers.

A living magazine bearing the title that this one bears has a double opportunity and a double obligation. It can and should address itself to the question of how the several regions of the West formed, what were the struggles, what the aims, where the failures, who the ancestors. That is, it can help clarify the cutural continuity and create a historical tradition within which the westerner can locate himself. It also can and must address itself to the pressures and problems of the modern West, not because it is primarily a problem-defining or problem-solving publication, but because what we are is a consequence of what we have been, and what we become will depend on how lucidly and largely we understand present and past as a continuum. Quite frankly, we hope to put both past and present at the service of the future.

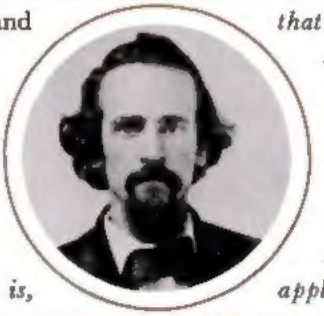


Wallace Stegner

WHAT THE RAILROAD WILL BRING US

BY HENRY GEORGE

Ten years before the publication of Progress and Poverty, *the most influential philosopher the West has produced took this dead-aimed shot at California's uncritical anticipation of the coming of the transcontinental railroad. Henry George's prophetic observations appeared in the young* Overland Monthly *in 1868; 99 years after, his heresies have that mellow ring of truth. "The truth is, that the completion of the railroad and the consequent great increase of business and population, will not be a benefit to all of us, but . . . only to a portion. As a general rule . . . those who* have, *it will make wealthier; for those who* have not, *it will make it harder to get. . . . Let us not imagine ourselves in a fool's paradise, where the golden apples will drop into our mouths. . . ."*



Upon the plains this season railroad building is progressing with a rapidity never before known. The two companies, in their struggle for the enormous bounty offered by the Government, are shortening the distance between the lines of rail at the rate of from seven to nine miles a day—almost as fast as the ox teams which furnished the primitive method of conveyance across the continent could travel. Possibly by the middle of next spring, and certainly, we are told, before midsummer comes again, this "greatest work of the age" will be completed, and an unbroken track stretch from the Atlantic to the Pacific.

Though, as a piece of engineering, the building of this road may not deserve the superlative terms in which, with American proneness to exaggeration, it is frequently spoken of, yet, when the full effects of its completion are considered, it seems the "greatest work of the age," indeed. Even the Suez Canal, which will almost change the front of Europe and divert the course of the commerce of half the world, is, in this view, not to be compared with it. For this railroad will not merely open a new route across the continent; it will be the means of converting a wilderness into a populous empire in less time than many of the cathedrals and palaces of Europe were building, and in unlocking treasure vaults which will flood the world with the precious metals. The country west of the longitude of Omaha, all of which will be directly or indirectly affected by the construction of the railroad (for other roads must soon follow the first), is the largest and richest portion of the United States. Throughout the greater part of this vast domain gold and silver are scattered in inexhaustible profusion, and it contains besides, in limitless quantities, every valuable mineral known to man, and includes every variety of soil and climate.

The natural resources of this country are so great and varied, the inducements which it offers to capital and labor are so superior to those offered anywhere else, that when it is opened by railroads—placed, as it soon will be, within a few days' ride of New York, and two or three weeks' journey from Southampton and Bremen, immigration will flow into it like pent-up waters seeking their level, and States will be peopled

and cities built with a rapidity never before known, even in our central West. In the consideration of the effects of this migratory movement; of the economical, social and political features of these great commonwealths shortly to be called into vigorous being, and of the influences which their growth will exert upon the rest of the Union and the rest of the world; of the changes which must follow the movement of the centre of population and power Pacific-wards, a boundless and most tempting field for speculation is opened up; but into it we cannot enter, as there is more than enough to occupy us in the narrower range suggested by the title of this article.

What is the railroad to do for *us*?—this railroad that we have looked for, hoped for, prayed for so long?

Much as the matter has been thought about and talked about; many as have been the speeches made and the newspaper articles written on the subject, there are probably but few of us who really comprehend all it will do. We are so used to the California of the stage-coach, widely separated from the rest of the world, that we can hardly realize what the California of the railroad will be—the California netted with iron tracks, and almost as near in point of time to Chicago and St. Louis, as Virginia City was to San Francisco when the Washoe excitement first commenced, or as Red Bluff is now.

The sharpest sense of Americans—the keen sense of gain, which certainly does not lose its keeness in our bracing air—is the first to realize what is coming with our railroad. All over the State, land is appreciating—fortunes are being made in a day by buying and parcelling out Spanish ranches; the Government surveyors and registrars are busy; speculators are grappling the public domain by the hundreds of thousands of acres; while for miles in every direction around San Francisco, ground is being laid off into homestead lots. The spirit of speculation, doubles, trebles, quadruples the past growth of the city in its calculations, and then discounts the result, confident that there still remains a margin. And it is not far wrong. The new era will be one of great material prosperity, if material prosperity means more people, more houses, more farms and mines, more factories and ships. Calculations based upon the growth of San Francisco can hardly be wild. There are men now in their prime among us who will live to see this the second, perhaps the first city on the continent. This, which may sound like the sanguine utterance of California speculation, is simply a logical deduction from the past.

After the first impulse which settled California had subsided, there came a time of stagnation, if not of absolute decay. As the placers one after another were exhausted, the miners moved off; once populous districts were deserted, once flourishing mining towns fell into ruin, and it seemed to superficial observers as though the State had passed the acmé of her prosperity. During this period quartz mining was being slowly developed, agriculture steadily increasing in importance, and manufactures gaining a foot-hold; but the progress of these industries was slow; they could not at once compensate for the exhaustion of the placer mines; and though San Francisco, drawing her support from the whole coast, continued to grow steadily if not rapidly, the aggregate population and wealth of the State diminished rather than increased. Through this period we have passed. Although the decay of portions of mining regions still continues, there has been going on for some time a steady, rapid development of the State at large—felt principally in the agricultural counties and the metropolis, but which is now beginning to make itself felt from one end of the State to the other. To produce this, several causes have combined, but prominent among them must be reckoned the new force to which we principally and primarily look for the development of the future—railroads. This year—during which more has been done in railroad building and railroad projecting than in all previous years combined—the immediate and prospective influence of this new force, the greater settler of States and builder up of cities, has first been powerfully felt. This year we have received the first great wave of the coming tide of immigration, the country has filled up more rapidly than for many years before, more new farms have been staked off and more land sold. And this year a spirit of sanguine enterprise has sprung from present prosperity.

It is not only the metropolis that is hopeful. Sacramento, Stockton and Marysville feel the general impulse. Oakland is laying out, or at least surveying, docks which will cast those of Jersey City, if not of Liverpool, into the shade; Vallejo talks of her coming foreign commerce, and is preparing to load the grain of the Sacramento and Napa valleys into ships for all parts of the world; and San Diego is beginning to look for-

ward to the time when she will have steam communication with St. Louis and New Orleans on the one hand, and China and Japan on the other, and be the second city on the coast. Renewed interest is being taken in mining—new branches of manufacture are being started. All over it is felt that the old era of stage coaches and ox and mule transportation is rapidly passing away, and that the locomotive, soon to penetrate the State in all directions, will in future carry the wheat to the wharf, the ore to the mill, the timber to the mine; supply the deficiency of navigable streams, open up millions of acres of the best fruit and grain lands in the world, and make accessible and workable thousands of rich mines.

In San Francisco the change is especially observable, and no one who walks our streets can fail to be struck with the stirring atmosphere of rapid growth. In the crowded avenues and squares, the bustling business air of the centre, the rapidly rising buildings of the suburbs; in new manufactories, docks and wharves, he will everywhere find evidence that San Francisco is fast rising to the rank of a great metropolis. . . .

The new era into which our State is about entering—or, perhaps, to speak more correctly, has already entered—is without doubt an era of steady, rapid and substantial growth; of great addition to population and immense increase in the totals of the Assessor's lists. Yet we cannot hope to escape the great law of compensation which exacts some loss for every gain. And as there are but few of us who, could we retrace our lives, retaining the knowledge we have gained, would pass from childhood into youth, or from youth into manhood, with unmixed feelings, so we imagine that if the genius of California, whom we picture on the shield of our State, were really a sentient being, she would not look forward now entirely without regret.

The California of the new era will be greater, richer, more powerful than the California of the past; but will she be still the same California whom her adopted children, gathered from all climes, love better than their own mother lands; from which all who have lived within her bounds are proud to hail; to which all who have known her long to return? She will have more people; but among those people will there be so large a proportion of full, true men? She will have more wealth; but will it be so evenly distributed? She will have more luxury and refinement and culture; but will she have such general comfort, so little squalor and misery; so little of the grinding, hopeless poverty that chills and cramps the souls of men, and converts them into brutes?

Amid all our rejoicing and all our gratulation let us see clearly whither we are tending. Increase in population and in wealth past a certain point means simply an approximation to the condition of older countries—the Eastern States and Europe. Would the average Californian prefer to "take his chances" in New York or Massachusetts, or in California as it is and has been? Is England, with her population of twenty millions to an area not more than one-third of our State, and a wealth which per inhabitant is six or seven times that of California, a better country than California to live in? Probably, if one were born a duke or a factory lord, or to any place among the upper ten thousand; but if one were born among the lower millions—how then?

And so the California of the future—the California of the new era—will be a better country for some classes than the California of the present; and so too, it must be a worse country for others. Which of these classes will be the largest? Are there more mill owners or factory operatives in Lancastershire; more brown stone mansions, or tenement rooms in New York?

With the tendency of human nature to set the highest value on that which it has not, we have clamored for immigration, for population, as though that were the one sole good. But if this be so, how is it that the most populous countries in the world are the most miserable, most corrupt, most stagnant and hopeless? How is it that in populous and wealthy England there is so much more misery, vice and social disease than in her poor and sparsely populated colonies? If a large population is not a curse as well as a blessing, how was it that the black-death which swept off one-third of the population of England produced such a rise in the standard of wages and the standard of comfort among the people?

We want great cities, large factories, and mines worked cheaply, in this California of ours! Would we esteem ourselves gainers if New York, ruled and robbed by thieves, loafers and brothel-keepers; nursing a race of savages fiercer and meaner than any who ever shrieked a war-whoop on the plains; could be set down on our bay tomorrow? Would we be gainers, if the cot-

ton-mills of Massachusetts, with their thousands of little children who, official papers tell us, are being literally worked to death, could be transported to the banks of the American; or the file and pin factories of England, where young girls are treated worse than ever slaves on Southern plantations, be reared as by magic at Antioch? Or if among our mountains we could by wishing have the miners, men, women, and children, who work the iron and coal mines of Belgium and France, where the condition of production is that the laborer shall have meat but once a week—would we wish them here?

Can we have one thing without the other? We might, perhaps. But does human nature differ in different longitudes? Do the laws of production and distribution, inexorable in their sphere as the law of gravitation in its, lose their power in a country where no rain falls in the summer time?

For years the high rate of interest and the high rate of wages prevailing in California have been special subjects for the lamentation of a certain school of local political economists, who could not see that high wages and high interest were indications that the natural wealth of the country was not yet monopolized, that great opportunities were open to all—who did not know that these were evidences of social health, and that it were as wise to lament them as for the maiden to wish to exchange the natural bloom on her cheek for the interesting pallor of the invalid?

But however this be, it is certain that the tendency of the new era—of the more dense population and more thorough development of the wealth of the State—will be to a reduction both of the rate of interest and the rate of wages, particularly the latter. This tendency may not, probably will not, be shown immediately; but it will be before long, and that powerfully, unless balanced and counteracted by other influences which we are not now considering, which do not yet appear, and which it is probable will not appear for some time yet.

The truth is, that the completion of the railroad and the consequent great increase of business and population, will not be a benefit to all of us but only to a portion. As a general rule (liable of course to exceptions) those who *have*, it will make wealthier; for those who *have not*, it will make it more difficult to get. Those who have lands, mines, established businesses, special abilities of certain kinds, will become richer for it and find increased opportunities; those who have only their own labor will become poorer, and find it harder to get ahead—first, because it will take more capital to buy land or to get into business; and second, because as competition reduces the wages of labor, this capital will be harder for them to obtain.

What, for instance, does the rise in land mean? Several things, but certainly and prominently this: that it will be harder in future for a poor man to get a farm or a homestead lot. In some sections of the State, land which twelve months ago could have been had for a dollar an acre, cannot now be had for less than fifteen dollars. In other words, the settler who last year might have had at once a farm of his own, must now either go to work on wages for some one else, pay rent or buy on time; in either case being compelled to give to the capitalist a large proportion of the earnings which, had he arrived a year ago, he might have had all for himself. And as proprietorship is thus rendered more difficult and less profitable to the poor, more are forced into the labor market to compete with each other, and cut down the rate of wages—that is, to make the division of their joint production between labor and capital more in favor of capital and less in favor of labor.

And so in San Francisco the rise in building lots means, that it will be harder for a poor man to get a house and lot for himself, and if he has none that he will have to use more of his earnings for rent; means a crowding of the poorer classes together; signifies courts, slums, tenement-houses, squalor and vice.

San Francisco has one great advantage—there is probably a larger proportion of her population owning homesteads and homestead lots than in any other city of the United States. The product of the rise of real estate will thus be more evenly distributed, and the social and political advantages of this diffused proprietorship cannot be over-estimated. Nor can it be too much regretted that the princely domain which San Francisco inherited as the successor of the pueblo was not appropriated to furnishing free, or almost free, homesteads to actual settlers, instead of being allowed to pass into the hands of a few, to make more millionaires. Had the matter been taken up in time and in a proper spirit, this disposition might easily have been secured, and the great city of the future would have

Continued on p. 66

EPIC ON GLASS

The men who built the first transcontinental railroad were well aware that they were undertaking the Work of the Age. However the corporate structures of the Union Pacific and Central Pacific were rigged, however many millions disappeared through contractual slight of hand, the prime movers of these organizations knew they were making history as well as money. As a result, they employed photographers to document the building of the "Overland."

BY ROBERT WEINSTEIN AND ROGER OLMSTED

The Union Pacific was particularly fortunate in selecting A. J. Russell as its chief photographer, doubly fortunate in that Russell's original negatives have survived these nearly 100 years. Russell had an eye for history that included workaday documentation along with ripest press-agentry—as the photos on these two pages show.

At the left is U.P. #3, a little yard goat perceived and revealed. The other picture was made at Fort Sanders, then the end of the line, in July, 1868, when General Grant dropped in to look around

and settle a running feud between Chief Engineer Grenville Dodge (ex-major-general) and T. C. Durant, vice-president and chief promoter of the U.P. Grant is standing in front of the birdcage, left of center. William T. Sherman is at center, framed by the doorway. Philip Sheridan is third from the left. Second from the left is Sidney Dillon, fiscal brains of the U.P. To the right of the imposing, top-hatted figure of General Harney is Durant, looking glum enough to be pondering still the revelation that General Dodge pulled more weight with Generals Grant and Sherman than he did.

During a considerable part of the Civil War, General Dodge had supervised the reconstruction of railroads destroyed by the retreating Confederate armies in the West. Andrew Joseph Russell, too, had been involved in wartime railroad construction—as official photographer to the construction corps of the United States Military Railroads.

By 1865, having in three years photographed more tracks and trestles than any man before him in history, Russell was heartily sick of railroading. He opened a photographic studio in New York City. Perhaps he did not do well in the business, perhaps he missed the excitement of rip-roaring railroad building, perhaps he was captivated by reports of the unprecedented pace of construction across the Great Plains. Whatever the reason, he heeded the urgent requests of former officers working for the Union Pacific and in 1868 turned westward to Nebraska and Wyoming Territory.

As official photographer for the U.P., Russell and four assistants made some 600 stereographic views of the road. Russell personally exposed over 200 10x13-inch, wet-plate, collodion negatives. It is from these original negatives that the views on these pages are reproduced.

However tired he may have been of railroading, Russell had no difficulty in capturing the brute beauty of the brass-bound 4-4-0's of the U.P. At left is #80 beneath the water tower and giant windmill at Laramie. Below, at Wyoming Station, #23 sports the antlers of a noble elk.

In 1868 making a photograph was still a difficult and very specialized task, involving preparation, exposure, and development of the negative in immediate sequence. Thus, in addition to his bulky camera, the field photographer had to carry his darkroom with him.

The specially-fitted wagon of A. J. Russell is seen at the far right in the upper photograph on page 15. The figure in the center of this scene is General Jack Casement, track-laying contractor for the railroad. His wild Irish railroad builders lived aboard the work train in the background. This "Hell on Wheels" (an expression also applied to the migratory succession of headquarters' towns that followed the construction) advanced an in-

credible 425 miles in the working season of 1868. Two years before one mile a day across the plains had been thought phenomenal; now two miles a day across Wyoming was average.

An excursion out to the "end of the track" to watch Jack Casement's record-breaking crew was a prerogative occasionally seized by directors of the road. Mr. Bushnell's party is seen in the photograph at the left. At right is a group at Echo City, Utah, identified by Russell only as the "Rocky Mountain Glee Club."

Unfortunately, the notations made by Russell on the margins of the glass negatives are uniformly scanty. Even the identity of the photographer had been mislaid until recently, when Professor William D. Pattison of the University of California at Los Angeles saw the plates in the American Geographical Society archives and was able to correctly identify their author.

"Steam Shovel at Hanging Rock, Echo Canyon," is the original legend on this photograph. Surprisingly, the steam shovel does not appear to have been used much in the construction of the overland railroad—though the "steam paddy" was very effective in leveling the sand hills of San Francisco in the early 1850's. At the height of the construction race between the U.P. and the C.P. over 10,000 men were employed by each road—most of them in grading.

(Overleaf) One of the most majestic of Russell's views, so dazzling in its detail that the eye has difficulty settling into focus, is this scene showing the test of a bridge in Weber Canyon, Utah. The "retouched" effect of the flowing river is the result of the comparatively long exposure required by the collodion negative.

(Above) "Salt Lake Valley from Corinne, Brigham City in the distance." Corinne, last "Hell on Wheels" spawned by the U.P. (if one excepts notorious Promontory as belonging in part to the C.P.), supported nineteen saloons, two dance halls, and four-score accommodating ladies. To its promoters, it was "the Queen City of the Great Basin;" to its Mormon neighbors it was a plain scandal.

Another scandal to the Saints was the by-passing of Salt Lake City in favor of a railroad route north of the lake. Their suffering was assuaged somewhat by the scramble of both railroads to press grading contracts upon them. Brigham Young himself took the U.P. contract, and a firm headed by a bishop took on the C.P. work. At the right is Brigham Young's house in Salt Lake—correctly assumed by Russell to be a subject of perennial morbid curiosity to easterners.

The meeting of the rails! In the famous view at the left, Grenville Dodge (right) and Samuel Montague (chief engineer of the C.P.) shake hands.

The views of the "Last Spike" ceremony at Promontory, on May 10, 1869, are quite naturally the most celebrated of Russell's photographs of the building of the Union Pacific. This epochal event was in many ways the climactic scene in the drama of "Manifest Destiny."

In the view below (shown in closer detail at left), T. C. Durant (1) stands on the U.P. side of the last tie, hammer at the ready. Sidney Dillon (2) appears to be holding one of the several "last spikes." In front of Dillon is Grenville Dodge (3).

Where is Leland Stanford? Perhaps he is the slightly blurred figure (4) between Durant and (5) Mrs. Mary L. Ryan (wife of Stanford's secretary). In any event this man appears to be holding a very shiny hammer (also a bit blurred by movement), probably the silver sledge presented to Stanford. Holding the shovel is J. H. Strobridge (6), construction superintendent of the C.P., and next to him (7) is Mrs. Strobridge.

These photographs have been reproduced by a two-plate process from modern contact prints made from the original negatives in the American Geographical Society. Three of the prints were kindly loaned by Charles C egg from the Lucius Beebe collection. While some of Russell's views have been published frequently, they have usually been badly printed – and often attributed to Col. C. R Savage. A happy exception is the treatment in Beebe's **The Central Pacific & Southern Pacific Railroads** (Berkeley, 1963)

As the identification of all of the dignitaries in the close-up on the opposite page would be of considerable interest to iconographers of the West, we invite readers to contribute information which it was finally beyond our patience to recover. If sufficient identifications should accumulate, we will publish them in a forthcoming issue of **The American West Review.**

THE REVOLOIDAL SPINDLE AND THE WONDROUS AVITOR

BY T. H. WATKINS

The bulbous contours of the Avitor, 1869, inspired the Alta California *to dub it the "winged whale."*

In 1849, Jules Verne was but twenty-one years old. The rockets and flying machines and sundry other gadgets which were to populate his special world were some years in the future—or existed only in his mind. Not so the visions of Rufus Porter, sometime editor of the *New York Mechanic*, the *Scientific Mechanic*, and the *Scientific American*. Porter was the ubiquitous Yankee Mechanic, leavened with a dash of Barnum-like expansiveness; he saw dreams as something to be made real, and the hysteria of the Gold Rush presented him with the opportunity. As he observed eager, California-bound goldseekers clamoring for transportation in New York, he determined to get them to the gold fields by a method so expeditious he was astonished that no one else had hit upon it: manned flight.

Rufus sat down and did some preliminary calculating, then issued a promotional booklet entitled *Aerial Navigation: the Practicality of Traveling Pleasantly and Safely from New York to California in Three Days Fully Demonstrated*. "To establish the practicality of aerial locomotion," Porter said, "nothing more is required than the combination of three general and well-established principles: first, that a vessel containing hydrogen gas is buoyant in atmospheric air; second, that a revoloi dal spindle of any size may be propelled through the air at a rapid rate, without any atmospheric resistance;

and third, that a spiral fan-wheel or screw-propeller will effect a propulsive power by action on atmospheric air."

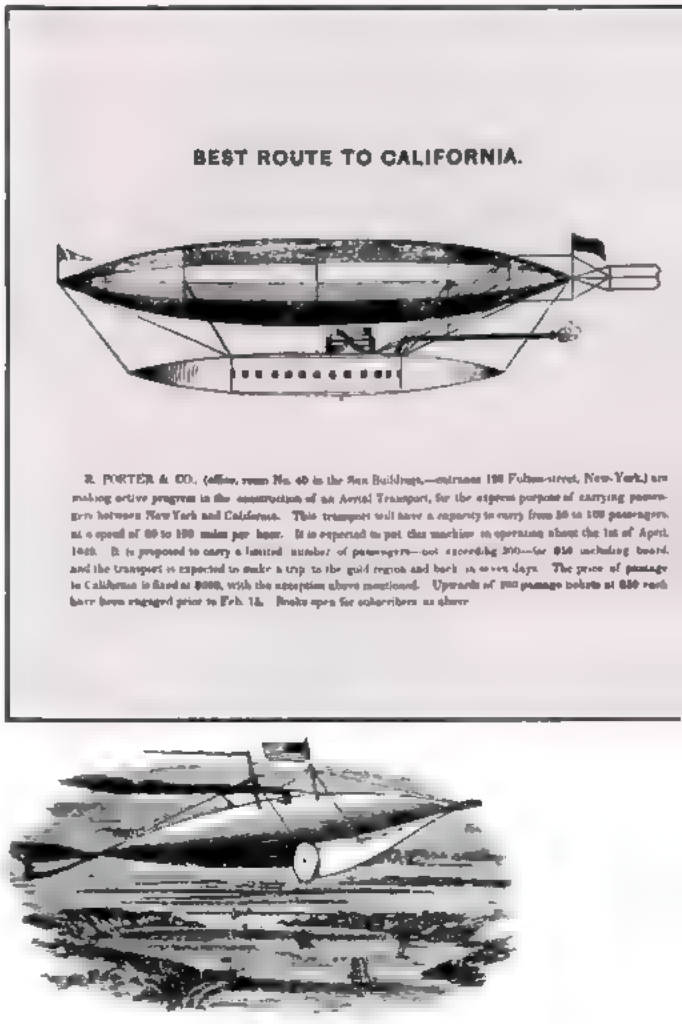
Porter went beyond such generalities, however. His "Aerial Locomotive" was described in considerable detail, including the fact that the revoloidal spindle, or gas bag, was to be no less than 800 feet long and 50 feet wide, and with its passenger carriage would weigh 14,000 pounds. This, Porter figured grandly, would leave "a buoyancy of 42,000 pounds, sufficient for 200 passengers and their baggage." The engine, of course, would be steam, there being little choice in the matter, and it would power two propellers with eight blades apiece, each blade ten feet long. The propellers would operate at a proposed 200 r.p.m., propelling the contraption through the "atmospheric air" at a rate of 100 miles per hour—providing it met with no headwinds.

As the conclusion to his booklet, Porter indulged in a bit of titillating prediction: "It may be anticipated that within a few months these aerial machines may be seen soaring in various directions and at different elevations, some apparently among or above the clouds, and others, like swallows, sailing leisurely just above the surface of the earth. . . . Let our gentle readers imagine themselves . . . cruising along by the steep and rugged sides of the Rocky Mountains, and laughing at the astonished countenance of the harmless grizzly bear, or at the agility of the frightened antelope; and then descending to the extensive prairies to watch the prancing of wild horses, or the furious rushing of hordes of Buffaloes."

Porter was good at painting pictures, but apparently less so at the mechanics of promotion. He advertised extensively, proposing to carry passengers to California for a meager $100, and being a nineteenth-century Yankee, offered up stock in his "Air Line." Both offers inspired a notable lack of support. J. E. Sherwood's *The Pocket Guide to California,* one of the many guidebooks which proliferated during the Gold Rush years, took note of Porter's unique contribution to technology but added a sly note of disapproval: "We advise our readers to *look-out* for the fast line."

Porter never did scrape together enough money to build his monumental (and monumentally unworkable) airship, but the dream of flitting from New York to California and back by air had not died—only sickened a bit. It was revived some five years later at the opposite end of the continent, appropriately enough. Again, the visionary concerned was an editor with a technological

The superbly confident advertising drawing concocted by Rufus Porter in 1849 bears an unmistakable family resemblance to the romantic steel engraving issued by the Aerial Steam Navigation Company some twenty years later. Porter's drawing, unsurprisingly, suffered enormously at the hands of New York City's cheerfully irreverent public press—not to mention a number of snide lithographers (see the cartoon, page 26).


BEST ROUTE TO CALIFORNIA.

R. PORTER & CO. (office, room No. 40 in the Sun Buildings,—entrance 128 Fulton-street, New-York,) are making active progress in the construction of an Aerial Transport, for the express purpose of carrying passengers between New York and California. This transport will have a capacity to carry from 50 to 100 passengers, at a speed of 60 to 100 miles per hour. It is expected to put this machine in operation about the 1st of April, 1849. It is proposed to carry a limited number of passengers—not exceeding 200—for $150 including board, and the transport is expected to make a trip to the gold region and back in seven days. The price of passage to California is fixed at $300, with the exception above mentioned. Upwards of 100 passage tickets at $150 each have been engaged prior to Feb. 15. Books open for subscribers as above

bent: Frederick Marriott, proprietor of the San Francisco *News Letter*.

Marriott's interest in aerial matters was of long duration. A native of England, he had associated himself in the 1840's with a British group called the "Aerial Transit Company," which advocated the crossing of the Atlantic Ocean by air. Nothing came of the venture, and sometime around 1850 the adventurous Marriott came to San Francisco (by ship, it might be added). In 1854, after visiting the public display of what was called "Richardson's Dove Battery"—a winged affair which presaged in looks, if not in performance, the monoplane of the twentieth century—Marriott once again became captivated by the idea of long-distance airships.

As an engineer, Marriott was somewhat more cautious than the optimistic Porter; it took him ten years to come up with what he considered a workable solution to the problem of transcontinental flight. He was particularly meticulous in his examination of atmospheric currents, and could often be seen on the roof of San Francisco's Montgomery Block, consulting with the Chinese who used it as a base for ceremonial kite-flying. The Chinese cooperated by sending up kites for his observation. Marriott would scribble hurried notes, then retire to the basement of the building where he converted theory into his brand of reality.

He was far more competent than Porter as a promotion man, however, for he somehow convinced a number of sober San Francisco financiers (including banker William Ralston) to invest time and money enough for the incorporation of the Aerial Steam Navigation Company on August 31, 1866. Plans were immediately laid for the construction of a prototype of the airship.

The model was finally finished by the end of June, 1869. It was 37 feet long and 14 feet wide, and sported several startling innovations. The first of these was a small brass alcohol steam engine, designed by George K. Gluyas, president of the California Steam Navigation Company. The engine was inserted in a niche in the underside of the gas bag, inches away from several hundred cubic feet of hydrogen gas. As small and lightweight as the engine might have been, it was still so heavy that the whole airship had little more than negative buoyancy. This was where Marriott put his kite-flying observations to good use. Flanking the gas bag on either side were muslin wings, or "inclined planes," and at the end of each of these was attached a propeller, driven by the steam engine. The idea, as the Company's own *Report* put it, was that the planes "by their impingement on the air," would materially aid "the elevation of the machine when in motion."

The airship was christened the "Avitor Hermes, Jr.," and a flight test scheduled for the morning of July 2, 1869, at the Shell Mound Race Track in San Mateo County.

By all reasonable standards of the time, the flight was at least a qualified success, as a correspondent for the *Scientific American* reported:

"With the first turn of the propellers she rose slowly into the air, gradually increasing her speed until the rate of five miles per hour was attained. The position of the rudder caused her to describe a great circle, around which she passed twice, occupying about five minutes each time. . . . cheer upon cheer rose from the little group of anxious spectators." They had reason to cheer: the Avitor's maiden voyage was the first powered flight of a lighter-than-air craft in America.

Another test was scheduled for the following day, but a faintly sardonic reporter for the *Alta California* made it clear that there was little cheering done that day: "We found the 'Avitor' inflated, and the engineers and attendants leading the stately little fellow from the shed

When the Aerial Steam Navigation Company began to feel the pinch of hard times, complicated by a thundering rush of public disinterest, it reacted in an all-too-typical western fashion by immediately issuing a new series of stock certificates — these valued at $100 each. Most were taken up by the officers of the company.

. and into the open air." Unhappily, strong winds made it impossible to fly the Avitor outside, and it was returned to the shed and demonstrated there. Its performance was hampered by the relatively close confines of the shed, and the *Alta California* was unimpressed: "We are compelled to say that the performance looked something like a failure, and a feeling of regret, rather than ridicule, pervaded the company present, at the lowering of the hopes that had been raised by its over-sanguine inventor."

Undiscouraged, the Aerial Steam Navigation Company took the Avitor to the Mechanic's Pavilion in San Francisco, where they put it through its paces at nine, eleven, two, and four o'clock every day, bravely ignoring the published jibes of the *Alta California*, which dubbed the Avitor the "aerial nondescript," and the "winged whale." The San Francisco *Bulletin* viewed the daily exhibitions somewhat more kindly: "After considerable delay," it said in reporting one performance, "the inflation was completed, so that the Avitor was able to maintain its position free of the floor. The steam was got up and the propellers set in motion by the miniature steam engine, when it started easily ahead; the propellers turning at about 60 to 80 revolutions per minute. The machine was propelled at a speed equal to a rapid walk. . . . It was evident that it could be moved at a more

Continued on p. 69

BERNALILLO COUNTY

BY WILLIAM BRANDON

When I was seven years old we went to live on a little ranch in Bernalillo County, New Mexico. Nothing could have made me happier since at the time I had an ambition to be a cowboy. I haven't entirely gotten over the ambition yet.

In Barnalillo County I got to be a cowboy. I had a horse named Buddy, and there was a cow, and sometimes a calf, and a four-acre field for me to round it, or them, up in. I often spent all day riding herd on the cow while she grazed. She was a well-herded cow, but it spoiled her. She would try to come along with Buddy and my brother Cal and me when we went to school. When we came back in the evening she would be bitter and spiteful and get bloated on purpose, and Cal and I would have to run her up and down until long after dark to unbloat her.

I also had a pair of beat-up chaps and what was supposed to be a cowboy hat. In style, the hat was more William S. Hart than Tom Mix. It looked as if it had been handed down to me after William S. Hart had used it for sacking up potatoes. But I thought it was pretty fine, although I got bow-ears from it. I was gratified to get bow-legged, and I am still bow-legged today and secretly proud of it. I'm still bow-eared too, but you have to take one thing with another.

The world is big and someplace in it there may be better country for growing up in, but surely none a kid could like better for growing up in if he happened to have an ambition to be a cowboy. Nowadays malevolent psychologists tell us that childhood is not a happy time at all but only looks that way from a distance. Clearly they were never cowboys in New Mexico at the age of nine or ten. Great and terrible events were abroad in the land in those years: the Teapot Dome loomed over New Mexico; the Bursum Bill lurked and menaced; the McNary–Haugen Bill was defeated; the Santa Fe yards in Albuquerque caught fire. But I lived in bliss in spite of everything. The only genuine unhappiness I have ever been able to remember from that life was when we moved away. Then I had to let Buddy be sold. I can't think of it yet without a lump in my throat. I was eleven then and a good deal too big to cry, and naturally cowboys didn't anyway, but I went out behind the adobe feed shed and wept as I never had before and hope I never do again. But the pain of an ending can't outweigh the previous joys of being. Otherwise we'd all sensibly strangle ourselves in our infancy.

It happened, more or less by accident, that Buddy was not only a real cow horse but also a professional cutting horse. Sometimes in the spring and fall I reluctantly permitted him to be rented out for that purpose to legitimate cowboys, who always praised him highly. Once, a

polo player from the cavalry team down at Fort Bliss, at El Paso, came up to see him and wanted to buy him.

With all these accomplishments Buddy had considerable contempt for me and frequently put me in my place, which was head over heels in the ditch. That horse must have thrown me nine thousand times by the most conservative estimate. He wouldn't carry double, so whenever we wanted a little rodeo my brother Cal and I had only to hop on him both at once and he would pitch in great shape.

There was a boy named Jesús Gonzalez who had a long-legged white mare, very fast, and she could outrun Buddy with a leg to spare once she got started, but when we had races we raced to a mark and back again, and Buddy would sometimes win because of the turn. He was as handy as a pocket in a shirt. But he was too handy for me. When he would skid behind and peel himself around in one of those remarkable quick turns and take out again with a bound, he would often as not leave me going straight ahead. So he was disqualified for a lot of races he won, merely because I didn't come back to the starting line with him. I think he thought it was unfair and that he was overhandicapped to begin with, but he kept trying, and now and then he would win with me still on him, technically.

Like any intelligent horse, Buddy didn't like to leave home. A mystic spot about a hundred yards down the road from our gate represented the outermost limits of home to him, and here he would want to turn back. I would haul him around with both hands and start him out again. Then he would turn around again. Then I would break a stick off a cottonwood limb and whack him. Then he would back down in the ditch and flatten his ears. Then I would kick him and whack him and he wouldn't move, and at this point Cal would always appear, to jeer at my humiliation. Thinking about it, I can't understand why I loved that damned horse. But I did. I still do.

Whenever Buddy was left out to pasture for a few days without being used, he forgot that he was supposed to be broke and gentle. He wouldn't let himself be caught up, and when he *was* caught up he wouldn't let himself be saddled. All of this was a battle, and he would rear back and plunge and kick sideways at you when you tried to tighten up the cinch, and for the first little bit after you got on him he would dance and kick up and try to get his head down so he could buck and throw you off. If he got his head down he always unloaded me, because when he really wanted to cut loose he could buck quite handsomely, at least so it seemed to me. It seemed to me he went eleven feet in the air every jump, and stayed up there sunfishing for five minutes at a time. Now I could never ride worth a plugged nickel, which should be evident, since most of the time I should have spent learning was instead spent bouncing on the ground, and it may be that to someone else Buddy would only have seemed a mite skittish. I never saw the great bucking horse Midnight, but I saw Five Minutes to Midnight once at Madison Square Garden, and all I know is that his bucking form sure looked familiar. My private opinion is that he was one of Buddy's students.

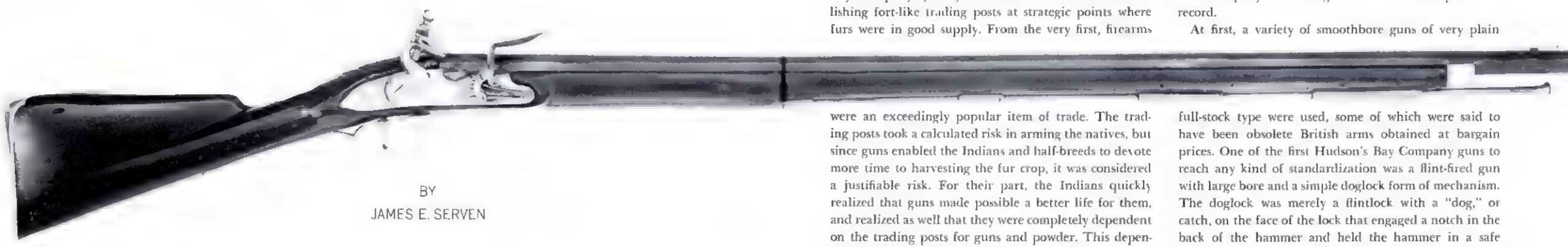
The way I caught Buddy up when he didn't want to be caught was to go down the road to a neighbor named Jeff, who was a real cowboy, and ask him to do it. Jeff would bring his rope, back Buddy into a fence corner, and spin out a loop and rope him, as easy as shutting a door. It was always a scene of great drama and excitement, because the loop would sing in the air, and Buddy would whirl gigantically this way and that, wanting to dodge it. Jeff wore cowboy boots and had a steeldust horse, and although he was a grown man, he was simple and kindly and put on no airs and treated Cal and me as equals. When he got time off he liked to ride up on the mesa, and sometimes he let me go along with him.

Our place was across the Rio Grande from Albuquerque, and behind us was the mesa, and beyond that three extinct volcanoes, all in a row. We never rode toward the river and Albuquerque, but always toward the mesa. Along the irrigation ditches there were trees, and there were square adobe houses garlanded with red peppers, and sand and chaparral. Sometimes the horses would walk or trot and sometimes Jeff would say, "Let's go!" and we would lope, and if a car went by in sight on the road Jeff would wave and we would let the horses run to show off.

Up on the mesa there were seas of rippled sand and islands of half-buried cactus. Jeff would always ride to the rim of the mesa and dismount and squat on his toes and look out over the river. Away across the river there were the Sandia Mountains—the Watermelons—veiled with magic colors that dissolved as the sun sank low, and the river was stippled with green along its edges and split into numerous winding ribbons, and the sky was streaked with rust. When the sun was setting the three volcanoes burned as if they were on fire. Then the afterglow leached through the air, the clearest light in the

Continued on p. 70

GUNS OF THE CANADIAN WEST



BY
JAMES E. SERVEN

The tools of survival often become the weapons of war, and the weapons of the past the toys of the future. The bow and arrow have already passed through such a transformation; and while the gun is still used in warfare and in isolated areas as a tool for survival, there can be little doubt but that it is experiencing a similar evolution. The Colt .44, the so-called conqueror of the plains, has become, in facsimile, a plaything for children, and the collecting of rare old guns a hobby for the rich or dedicated.

The Canadian West is no stranger to all this. Its area extends westward from the borders of Quebec and Ontario to the Pacific Ocean and includes what are now the provinces of Manitoba, Saskatchewan, Alberta, and British Columbia. It is a vast sweep of territory, this land, and the story of its development can hardly be separated from the story of the guns that helped to conquer it. In that story may be traced the evolution of the gun from tool to weapon to collector's item.

Throughout the vast territory of Canada the Hudson's Bay Company (HBC) once held absolute rule, establishing fort-like trading posts at strategic points where furs were in good supply. From the very first, firearms were an exceedingly popular item of trade. The trading posts took a calculated risk in arming the natives, but since guns enabled the Indians and half-breeds to devote more time to harvesting the fur crop, it was considered a justifiable risk. For their part, the Indians quickly realized that guns made possible a better life for them, and realized as well that they were completely dependent on the trading posts for guns and powder. This dependence played no small part in making it possible for a relatively few white traders to live peacefully among some 300,000 Indians.

East of the *cordillera* of the Rockies, guns and other supplies were brought into the Canadian West through Hudson's Bay, or by *voyageurs* through the chains of waterways linking east and west. These same voyageurs carried back peltries from the trading posts. The posts on the Pacific slope, on the other hand, were serviced by trading vessels, which sailed around Cape Horn and up to Northwest ports. Whether by land or by sea, most trade goods for Hudson's Bay Company posts came from England—from Birmingham, Manchester, and Leeds—although some trade guns and other goods were purchased in Belgium, the United States, and elsewhere.

For many years the flintlock was the standard weapon. Most of these guns had smoothbore barrels. The locks were designed with a concave "pan" to hold priming powder, over which a hinged steel cover called a "frizzen" projected upward at right angles. A piece of flint was held in the adjustable jaws of the cock or hammer. When the hammer was released by the trigger, it snapped forward and the flint struck the frizzen, causing it to swing forward, exposing the powder in the pan and creating sparks to flash the powder. A vent in the side of the barrel opposite the pan then communicated the fire to the main charge.

Some of the flintlock guns that saw Canadian service in the earlier years were brought in by French trappers and traders and were the typical French smoothbore guns of the period. However, up to the mid-1880's the majority of the firearms of the Canadian West were supplied at posts of either the Hudson's Bay Company or the Northwest Company. Of these guns we have a well preserved record.

At first, a variety of smoothbore guns of very plain full-stock type were used, some of which were said to have been obsolete British arms obtained at bargain prices. One of the first Hudson's Bay Company guns to reach any kind of standardization was a flint-fired gun with large bore and a simple doglock form of mechanism. The doglock was merely a flintlock with a "dog," or catch, on the face of the lock that engaged a notch in the back of the hammer and held the hammer in a safe position. The most popular gun in these years, however, was the Northwest gun, which originated around the mid-1700's and was the favorite for more than a century.

The Northwest gun was light but reasonably sturdy, with an uncomplicated plain lock providing flint ignition; it is frequently referred to as a fusil. The caliber averaged around 24 gauge (.56), and the bore was smooth. My own gun of this type has a 36" barrel and weighs 7 pounds. For comparison, the heavier French muskets averaged about .69 caliber, and the bulky British "Brown Bess" muskets had a .75 caliber bore.

The barrel of the Northwest gun would accommodate

shot or ball with equal facility, and had very good shocking power at close range. More importantly from the trader's point of view, it was inexpensive to make (the costs averaged from $5 to $8), for its uncomplicated design was well suited to the manufacturing techniques of the time.

Once firmly established, this pattern for the Northwest trade guns did not vary, except that the lock on a few later guns was designed for caplock ignition, a simplification of the flint-fired system. The percussion-cap locks retained the same general form and spring action of the flintlock, but the powder-pan and frizzen were removed and the hammer reshaped; the hammer's purpose now was to give a sharp blow to a small, hollow cap containing fulminate, which was placed snugly over a hollow cone or nipple on the side of the barrel. This "percussion cap" exploded when struck and sent its fire through the hollow nipple to set off the main charge in the barrel. In the United States, this new system was warmly welcomed and quickly adopted; but conditions in the Canadian West were different. Trading posts were remote and relatively few. Flint stones were easy to obtain, but not the little pea-sized percussion caps, which could also be lost easily, rendering a gun useless. In cold weather it was difficult to handle these little copper caps with numbed and mittened fingers. Therefore, the flintlock guns were favored in the Canadian West for a much longer period than anywhere else on the continent.

For more than seventy years, this serpent design appeared on the sideplate of the Hudson's Bay Company trade gun.

The Canadian climate dictated another device common to the Northwest gun: a large trigger guard to permit use with a mittened hand in cold weather or to accommodate an Indian practice of using two fingers to pull the trigger. For purposes of trademark, a serpent design was stamped on the sideplate opposite the lock of the Northwest gun, and some, but not all, lock plates bore the aditional figure of what was supposed to represent a fox. As one more means of identification, the barrel showed the heraldry of proof marks. To illustrate how firmly all these specific features represented "a good gun" in the Indian mind: it was found necessary to stamp similar guns made by Pennsylvania gunmakers with an imitation of the British proof marks to ensure their acceptance.

Barrel lengths varied from 36" to 48" for the majority of Northwest guns. In earlier trading, however, some guns with exceptionally long barrels were offered. There is a traditional story that guns with long barrels were offered by avaricious traders who demanded a stack of beaver skins piled as high as the muzzle in payment for a gun; hence, longer barreled guns brought in more profit. A more logical explanation of the long barrels is that in the early days the mistaken belief was that long barrels were necessary to obtain maximum burning efficiency of the powder and a consequent better range of the ball.

Guns of Northwest pattern were ordered from many different gunmakers. Wilson, Barnett, Parker Field & Co., Chance, Wheeler, and Ketland were a few of the more prominent English makers, and their guns dominated the trade. Tryon, Leman, Henry, and Deringer are recorded as makers of the Indian guns in the United States. Many of the American-made guns went to Indians in our own Northwest, but Canadian trading posts bought wherever the price was favorable.

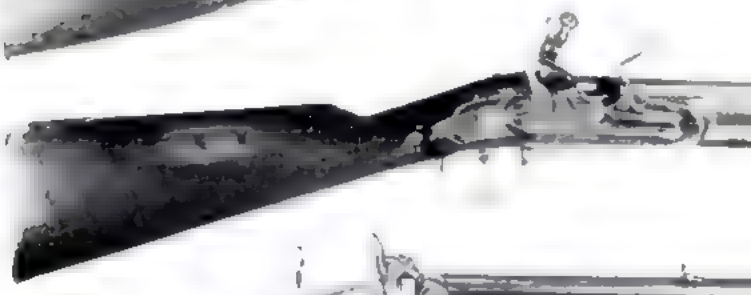
In many years of trading, the Hudson's Bay Company supplied thousands of the light Northwest guns within their widespread territory. Yearly shipments to their posts varied from 175 to over 700 individual guns. But hard use and the remoteness of their employment have given Indian trade guns a very low survival rate.

By the middle of the nineteenth century, several factors had combined to change the pattern of gun distribution and use in the Canadian West, and to undermine for all time the dominance of the Northwest gun.

One of the first of these factors was the rush to British Columbia's Fraser and Thompson River gold fields in 1858 of between thirty and forty thousand gold-seeking opportunists, only one in six of whom were British subjects. In this great rush came men armed primarily with weapons common to our own American West—the Model 1841 "Mississippi" Army rifles, Sharps breech-loading carbines, muzzle-loading cap and ball hunting rifles, heavy single shot horse pistols, the six-barreled "pepper-box" pistols, Colt five and six shot cap and ball revolvers and other types customarily found in the gun shops of San Francisco, then the hub of our West Coast trade. Thus, in Canada's Far West weapons of American make suddenly became more plentiful than British-made guns; furthermore, they were more advanced and of

Continued on p. 71

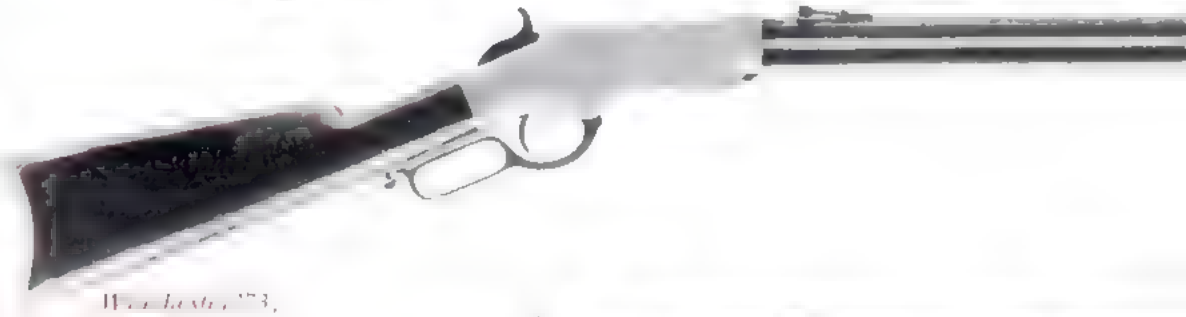
The earliest standardized trade guns commonly featured the simple "doglock" to hold the hammer in firing position



The ubiquitous and reliable trade flintlock – frequently called a fusil

The difficulty of handling tiny percussion caps in freezing weather was a drawback to the caplock – shown here in a multi-barreled version

When American gold-seekers spewed into the Fraser River area of British Columbia in 185x, they brought with them the 1841 "Mississippi" rifle (above) as well as such large bore caplock rifles as the famous Hawken (below), companion of the mountain man



Predecessors of the renowned Winchester '73, the .44 Henry (above) and the .56 Spencer (below) were the first repeating rifles to enjoy widespread popularity on the North American frontier, including the Canadian West

A MARVELOUS INDUSTRY CARRIED ON BY THE KICKAPOOS.

AN INTERESTING ACCOUNT OF A VISIT TO THEIR WIGWAM.

MAIN WINTER QUARTERS OF THE KICKAPOO INDIANS, NEW HAVEN, CONN., U. S. A.

MEDICINE SHOW

BY
ARRELL M GIBSON

The sale of medicine in its various forms is one of man's oldest enterprises. More often than not it has made use of some form of showmanship or ballyhoo to attract attention, overcome customer resistance, and promote sales. Today's radio-television commercials, touting remedies, cures, and health formulas, are no more than slick, sophisticated forms of an early art. Mountebanks entertained the mobs and peddled panaceas in ancient Greece and Rome, and medieval medicine men used acrobats and minstrels to attract crowds and hold them for the medicine pitch.

In early America, itinerant drug peddlers found sales slow for their stock in trade—cubeb, anise, cascara, cinchona, and gentian—largely because of competition from resourceful pioneer women who developed their own family remedies, and because of inroads from an emerging medical profession. Thus, to push their products, American medicine men revived the medieval practice of providing entertainment to attract crowds. By the eve of the Civil War at least twenty itinerant medicine shows featuring song and dance teams and melodrama, notably *Uncle Tom's Cabin*, were making annual circuits through the frontier settlements.

But it was in the bonanza age of public exploitation, the years between 1865 and 1900, that the medicine show really came into its own. For pure unabashed misrepresentation, the medicine-show pitchman of this age made pikers of the railroad- and mining-stock promoters, speculators, con men, and general boomers. By 1900, medicine shows numbered in the hundreds, one national company had over thirty traveling units in the field, and one observer complained that the country was "infested" with them.

Medicine shows varied in size from single-wagon enterprises to huge tent operations. The Hauser Medicine Company, serving the crossroad towns of the Southwest, hauled its all-Negro troupe, includ-

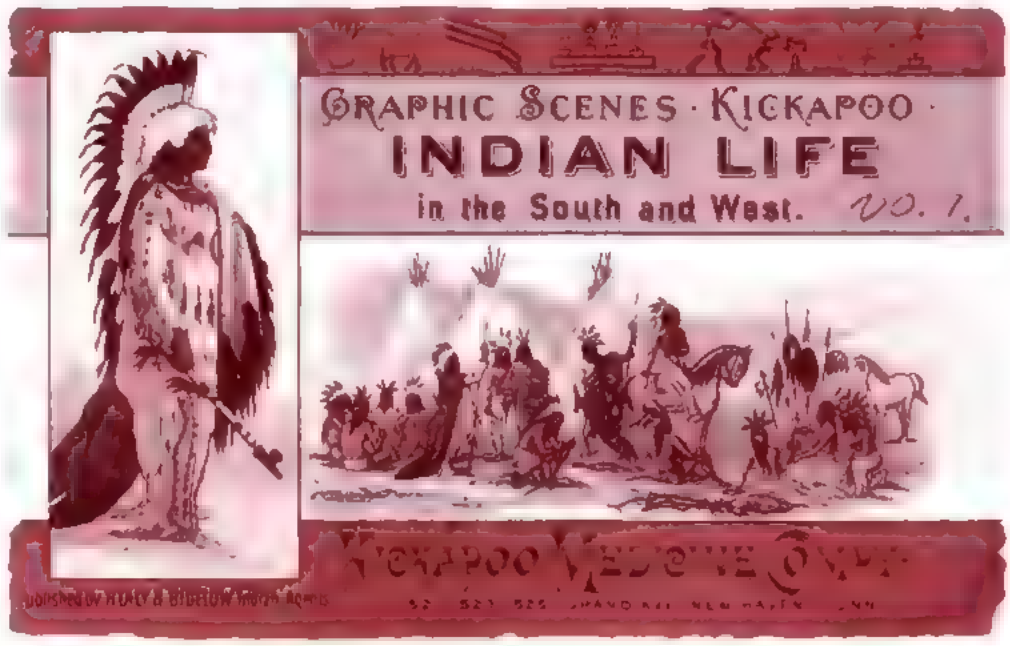
ing a spiritual-singing male quartet, in a gaudily decorated circus wagon. The Big Sensation Medicine Company, popular in the Nebraska towns, had a huge double tent with a sixty-foot top, a stage, and folding chairs and regular circus seats sufficient to accommodate 1,500. Big Sensation's staff of 31 included a twelve-piece band. In later years, some of the more successful shows, like the Kickapoo Medicine Company and Ton-Ko-Ko Medicine Show Enterprises, traveled in special railroad cars much like the circuses and carnivals. And the all-season medicine troupes rented opera houses and other public buildings for performances during the colder months.

From practice and experience a show formula or pattern developed—ballyhoo, entertainment, the spiel or medical lecture, then a closing performance. Ballyhoo was the most important, since to sell, the medicine man had to have an audience. When a medicine show arrived in town its manager might buy advertising space in local newspapers and hire small boys to distribute show handbills to each household. James Whitcomb Riley, who traveled for years with medicine shows on the midwestern circuit, painted signs and posters advertising his company's entertainment and remedies. If the show was a large one, a parade with brass band and banners announced its arrival and generated local interest. Performances were almost always held at night, with gasoline or kerosene flares for lighting. The larger shows charged an admission fee, generally from 10 to 35 cents. The small, out-in-the-open street shows were of necessity free.

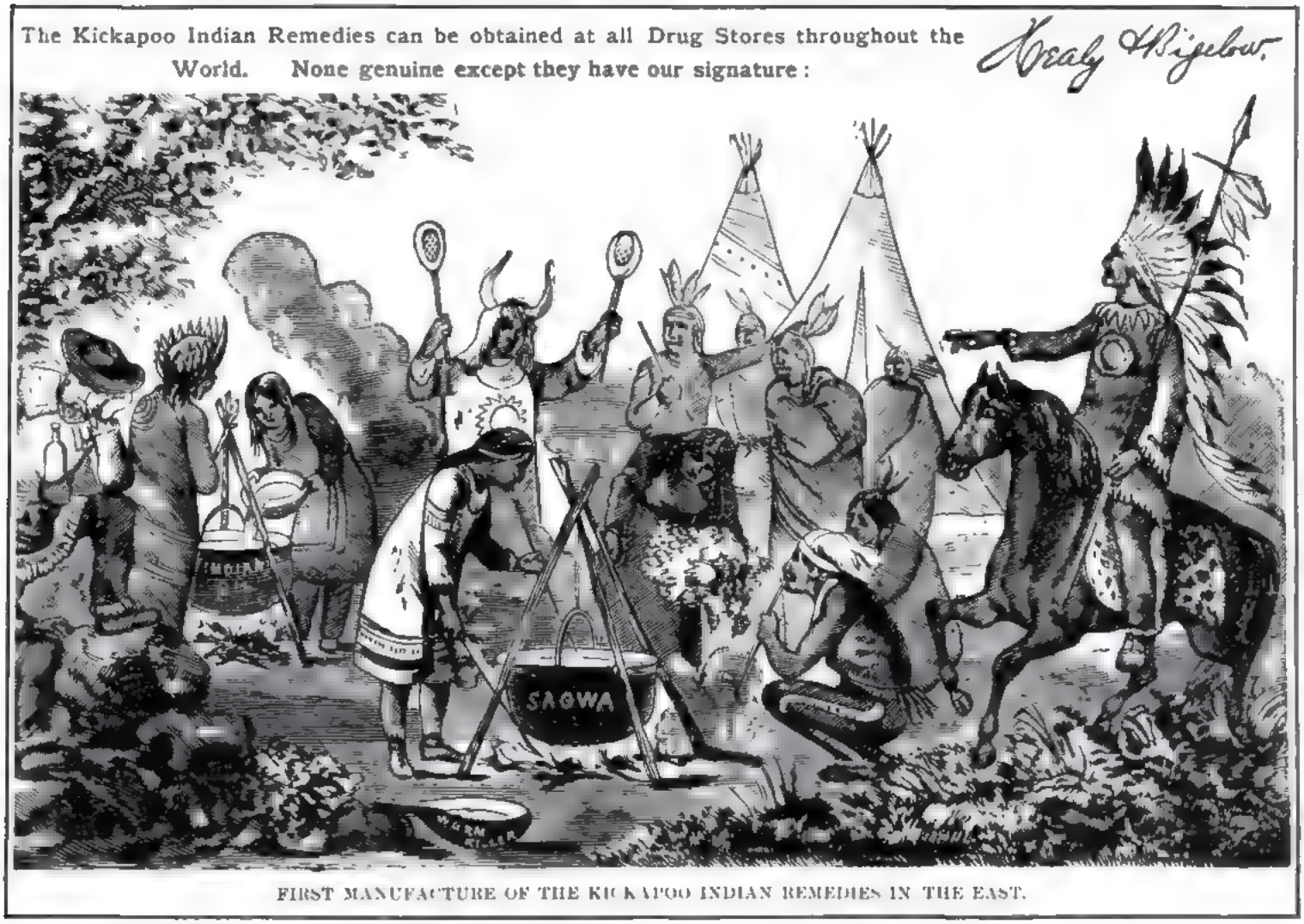
Next to ballyhoo in importance was entertainment, for the show held the crowd for the medicine pitch or spiel. The practice of opening and closing with entertainment was sound: the first round of acting and singing whetted a recreation-hungry frontier crowd's appetite for more; and the natives could be depended upon to sit through the commercial pitch in anticipation of more drama, singing, and dancing.

Medicine-show entertainment was selective. Thus, a format that succeeded in one section of the country might fail in another because of local prejudices, and the medicine shows were versatile enough to pattern their offerings after the tastes of the section they were serving. For example, the so-called Tom or Tommer shows, featuring the staging of *Uncle Tom's Cabin*, so effective before 1861 in promoting medicine sales, continued to draw the public in the North and West for several years after the close of the war, but clearly such a production would have failed abysmally as a drawing card in the South. Show themes that went over big in the East but would have failed in the West were those based on the Indian. Dr. N. T. Oliver, known professionally as Nevada Ned, a famous Kickapoo Medicine Company pitchman, said the Indian was usually romantic in ratio to the distance separating him from the frontier, and that whereas the Indian was loathed in the West, the East saw in him the noble savage.

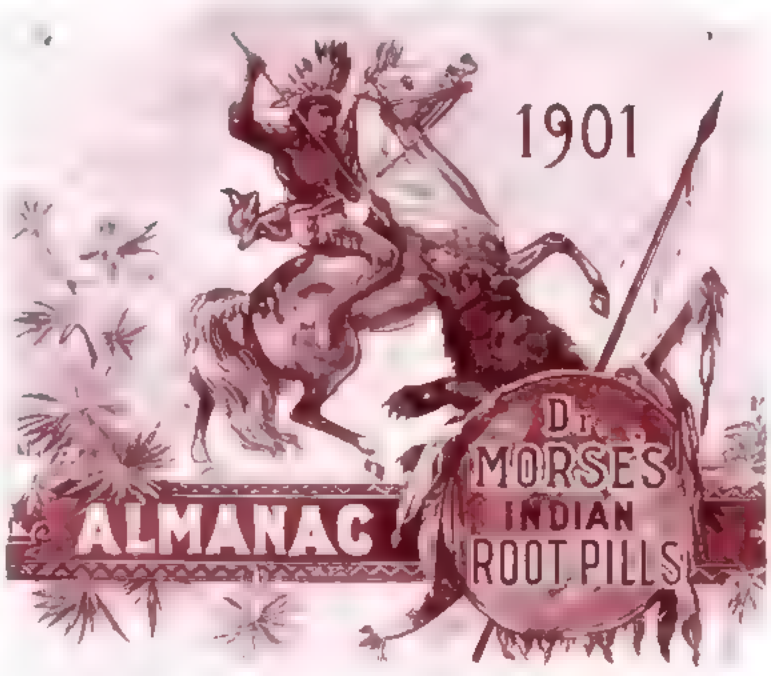
One entertainment form that succeeded East, West, North, and South was the minstrel troupe, and because of its universal appeal, virtually all medicine-show programs included blackface comedians. One writer explained that the minstrels were indispensable to the



The genuine Kickapoos, of course, had nothing whatever to do with the creative prevarications of Healy & Bigelow. Systematically oppressed in their relationship with the white man, they sulked on a tiny reservation in Oklahoma, perhaps blissfully unaware that they were enduring an additional humiliation.


The Kickapoo Indian Remedies can be obtained at all Drug Stores throughout the World. None genuine except they have our signature :
Healy & Bigelow.
SAGWA
FIRST MANUFACTURE OF THE KICKAPOO INDIAN REMEDIES IN THE EAST.

INDIAN SAGWA



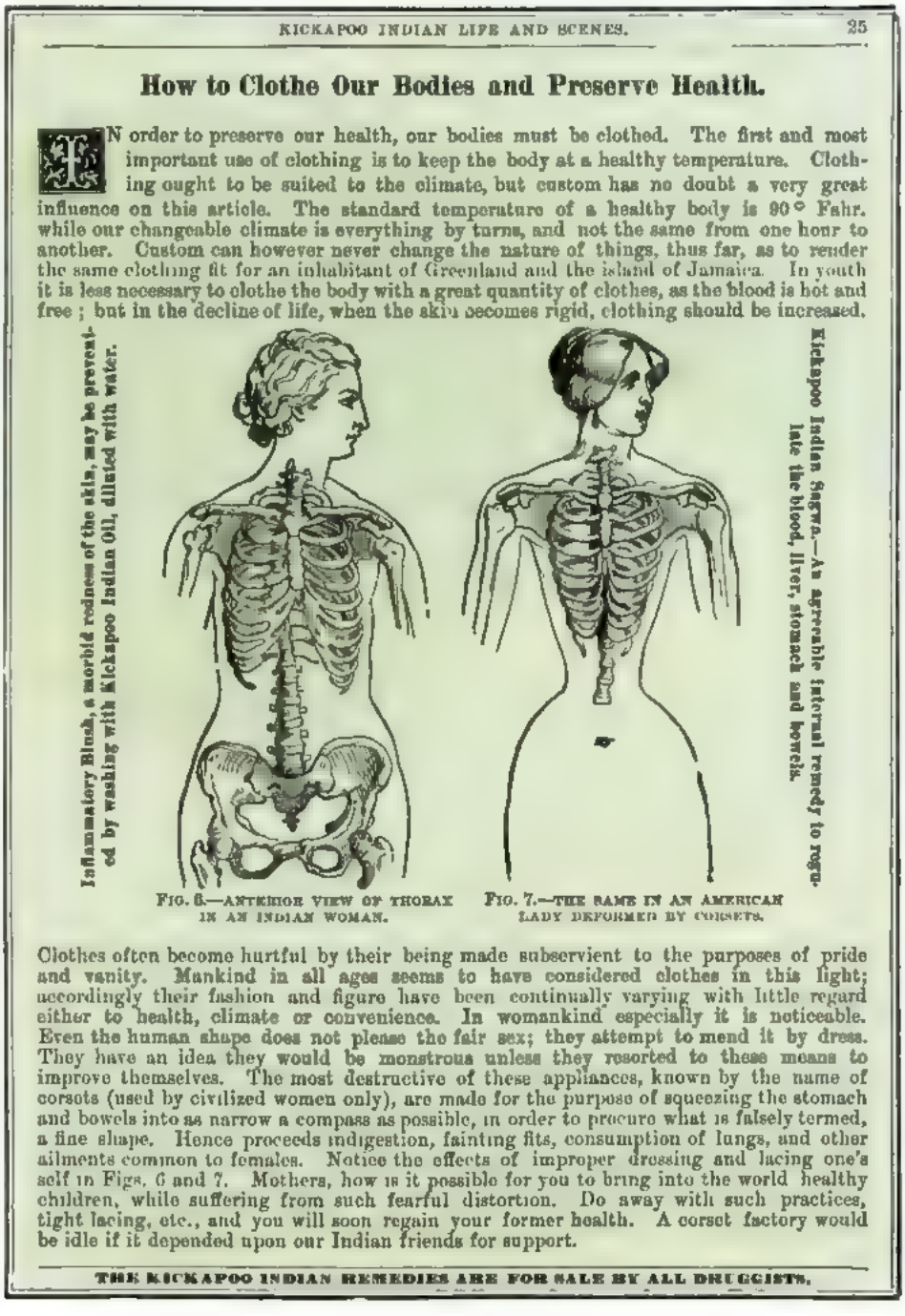
(above) The rendering of snake-oil, as depicted in the Kickapoo Medicine Company's promotional booklet, Life and Scenes Among the Kickapoo Indians. *(left) Sunset, moonrise, and Gothic diseases were featured by the W. H. Comstock Co. "La Grippe! The terror of Modern Days, yields to . . . Dr. Morse's Indian Root Pills."*

medicine show because their antics brought easy laughter, and "laughter greased the gullets of fools and opened their pocketbooks." For several medicine shows, especially the smaller ones, minstrel troupes constituted the total entertainment.

Most medicine shows with a variety bill included a magician, who delighted the natives with feats of legerdemain and mystic sleight-of-hand, and musical numbers by a band doubling as orchestra, the whole spiced up with tumbling, feats of strength, and vaudeville acts.

Various other entertainment forms were also popular on the medicine-show circuit. There were punch-and-judy shows, and demonstrations of hypnotism and ventriloquism, and phrenology lectures. One of the most daring billings for a medicine show was burlesque. There was no problem in the predominantly male mining, railroad, and logging camps or cowtowns, but the showman who dared offer burlesque in the farming towns had to counter with something for the ladies. Generally, they could be placated by an hour with the fortune teller. One medicine-show burlesque troupe featured the Mayo Twins, a scantily-clad pair of girls reported to have won international acclaim at the Palace Music Hall in London. According to one writer, the twins kicked so high

Healy & Bigelow had a penchant for the outlandish, as illustrated by this arch advice concerning feminine underpinnings. However, not even they would claim, as the drawing might imply, that the wearing of a corset could eliminate the entire pelvic bone structure. While one might x-ray an Indian maiden, it would have been indelicate to suggest that a flaxen-haired belle had anything at all in her tummy.



KICKAPOO INDIAN LIFE AND SCENES. 25

How to Clothe Our Bodies and Preserve Health.

IN order to preserve our health, our bodies must be clothed. The first and most important use of clothing is to keep the body at a healthy temperature. Clothing ought to be suited to the climate, but custom has no doubt a very great influence on this article. The standard temperature of a healthy body is 90° Fahr. while our changeable climate is everything by turns, and not the same from one hour to another. Custom can however never change the nature of things, thus far, as to render the same clothing fit for an inhabitant of Greenland and the island of Jamaica. In youth it is less necessary to clothe the body with a great quantity of clothes, as the blood is hot and free; but in the decline of life, when the skin becomes rigid, clothing should be increased.

Inflammatory Blush, a morbid redness of the skin, may be prevented by washing with Kickapoo Indian Oil, diluted with water.

Kickapoo Indian Sagwa.—An agreeable internal remedy to regulate the blood, liver, stomach and bowels.

FIG. 6.—ANTERIOR VIEW OF THORAX IN AN INDIAN WOMAN.

FIG. 7.—THE SAME IN AN AMERICAN LADY DEFORMED BY CORSETS.

Clothes often become hurtful by their being made subservient to the purposes of pride and vanity. Mankind in all ages seems to have considered clothes in this light; accordingly their fashion and figure have been continually varying with little regard either to health, climate or convenience. In womankind especially it is noticeable. Even the human shape does not please the fair sex; they attempt to mend it by dress. They have an idea they would be monstrous unless they resorted to these means to improve themselves. The most destructive of these appliances, known by the name of corsets (used by civilized women only), are made for the purpose of squeezing the stomach and bowels into as narrow a compass as possible, in order to procure what is falsely termed, a fine shape. Hence proceeds indigestion, fainting fits, consumption of lungs, and other ailments common to females. Notice the effects of improper dressing and lacing one's self in Figs. 6 and 7. Mothers, how is it possible for you to bring into the world healthy children, while suffering from such fearful distortion. Do away with such practices, tight lacing, etc., and you will soon regain your former health. A corset factory would be idle if it depended upon our Indian friends for support.

THE KICKAPOO INDIAN REMEDIES ARE FOR SALE BY ALL DRUGGISTS.

that farmers' wives wondered why they brought their husbands. But their indignation was mollified by the next number—Elita, billed as the world's greatest fortune teller and mind reader. The women were invited to write questions on cards passed through the audience. These were placed in envelopes, which were then sealed and collected. The ladies were assured that "this great mind reader will tell you your heart's secret, for she sees all, knows all. Elita, ladies and gentlemen, was born on the thirteenth day of the month, and she can trace her ancestry to the thirteenth century."

Practically all medicine-show entertainment was of the lively type. One of the few enterprises on record to hold to a conservative, dignified line was the Hamlin Wizard Oil Company. Between twenty and thirty Hamlin units were in the field each season, covering the territory from Chicago west to the Rockies. Each wagon, drawn by four to six horses, was a self-contained unit, with a driver, lecturer, male quartet, and a week's supply of Hamlin's Wizard Oil, Blood and Liver Pills, and Cough Balsam. Hamlin show units restocked at rail points across the trade territory, selling medicine at performances and also stocking stores along the route. One veteran showman who traveled the country with a Hamlin wagon unit said his company's trademark for years was the Lyceum Four male quartet. Each unit had a Lyceum Four, and all were dressed in uniform style—Prince Albert frock coat, gray dress vest, pin-striped trousers, and pearl-gray spats over patent leather shoes, the whole topped off with a high silk hat. Hamlin performers were the "last word in class, dignity, and social distinction." A Hamlin wagon unit might remain in a town from two to six weeks, and to improve the Company's image the troupe manager volunteered his quartet for church fairs, charity bazaars, and service in church choirs on Sundays. At the nightly performances, Hamlin's Wizard Oil Song Books for group singing, with a dozen popular songs plus testimonials and descriptions of human ills, were distributed free.

Costuming, especially as fitted out for the Hamlin Company's Lyceum Four quartets, was carefully calculated to please the crowd. If the show was playing to eastern audiences, the pitchman took on western garb, and became a buckskin-clad frontiersman billed as a "world-renowned Indian fighter, scout, and medicine man." In the West, medicine men wore eastern attire—cutaway coat, striped trousers, white shirt, black tie, heavy boots, and white felt hat. A mustache or beard improved the pitchman's image with the natives, who flocked to him with the same enthusiastic trust they accorded the itinerant evangelist who came periodically to save their souls.

In the medicine-show format, the health lecture followed the opening round of entertainment, and in some cases this pitch or spiel was so morbidly colorful and appealing that *it* was entertaining, too. The medicine man was a type. He had to have poise and stage presence, and to succeed he had to know his regions and his people, their prejudices and assumed needs. Above all else, he had to be able to "scare all hell out of a man." Commonly, he posed as the "poor man's friend," the "people's doctor." That these pioneers in advertising were persuasive is attested to by one medicine-show patron: "Why, a man could enter that medicine-show tent a picture of health but depart a terrible sick man with a bottle of cure-all clasped tightly in his hand and new hope in his heart."

In order to sell his tonics, pills, and exotic oils, the medicine man had first to persuade his listeners not only to recognize but to *feel* the symptoms of disease. He managed this by placing medical displays on the stage: jars of alcohol containing hookworms, tapeworms, livers, kidneys, hearts, and lungs; and huge anatomical charts with vital parts and the circulatory system printed in reds and purples and blues. Hookworms and tapeworms, bought from a slaughterhouse by the bucketful, curling in jars of alcohol, were favorite lecture pieces and always a crowd pleaser.

Once the audience was assured it was infected and afflicted with screaming convulsions, scorbutic eruptions, jaundice, and other dread diseases, the doctor turned to his sure-fire cure. The medicine pitch generally pushed a secret cure, drawn from exotic places, often from such a secret Indian formula as: "Indian Herb Medicine—handed down through generations of Osage Indians; Osages live to be 100 and never suffer an ache or pain."

The pitchman never failed to get a favorable reaction when he attacked the medical profession. Innuendoes, and allusions to the monopoly of the "regular" doctors who "withhold secrets and medicines necessary for the good of the people," boosted sales. He attacked surgeons as butchers, and pointed to the expense of medical care. The pitchman, on the other hand, was the humanitarian, the people's doctor, the friend of the common man, bringing forth the great elixir of life.

Some of the pitchmen demonstrated considerable

Continued on p. 74

HAYDEN IN THE BADLANDS

BY GILBERT F. STUCKER

"In the summer the sun pours its rays on the bare white walls, which are reflected on the weary traveler with double intensity, not only oppressing him with the heat, but so dazzling his eyes that he is not unfrequently affected with temporary blindness. I have spent many days exploring this region when the thermometer was 112° . . . and there was no water . . . within fifteen miles. But it is only to the geologist that this place can have any permanent attractions. He can wind his way through the wonderful canyons among some of the grandest ruins in the world. . . . It is at the foot of these apparent architectural ruins that the curious fossil treasures are found."

He was a nondescript little man of somewhat solitary habits. Scholarly in his youth, but with scant outward drive, he was tagged by his classmates as an unrealistic dreamer. When called upon to deliver his graduation address at Oberlin College in 1850, he lectured a bored audience on "The Benefits of a Refined Taste." He was, in short, hardly the sort of man one would have expected to "exactly meet the wants of the Great West," as that tough old scientist, J. P. Lesley, later said of him. Perhaps as much as any man, he earned those words. His name was Ferdinand Vandeveer Hayden; his pioneering explorations laid the foundations of our geologic understanding of much of the Trans-Mississippi West.

Hayden's geological studies began in 1853, in the Big Badlands of what is now South Dakota. He was then twenty-three. In his kit bag were an M.D. degree from the Albany Medical College of New York State and a work assignment from the state geologist, James Hall. Dispatched with him was Hall's assistant, F. B. Meek, an older man who combined a draughtsman's eye with a nose for fossils. They were to prospect for the remains of prehistoric animals.

Others had preceded them—the Indians and the fur traders and trappers. The Sioux knew the region as the "*Ma-koo-si-tcha*," the impassable country. They had seen the "stone bones" there, bones of the "Thunder Horse," a celestial creature that galloped out of the sky on stormy nights and disappeared into the earth.

The jawbone of one of them had found its way to St. Louis in 1846. Hiram A. Prout, a local physician, wrote the specimen up in the *American Journal of Science*, identifying the owner incorrectly as a *Paleotherium*. The bone was later found to belong to a titanothere, a hulking rhino-like beast once common on the western plains.

Prout's paper caused a sensation. East Coast savants unrolled their maps to ponder the blank expanse of the Badlands country. Three years later, geologist John Evans reconnoitered and mapped the area and collected some fossils. He was followed by Thaddeus Culbertson. Hayden and Meek arrived to begin the pioneer systematic study of the region's geology. The first major deposit of fossil bones discovered west of the Mississippi had been opened up.

It was a kind of gateway for young Hayden, that first exploration—a gateway not only into the prehistoric past, but also into his own future. Among the dry bones and eroded rock, where the thin nap of the present had been stripped away to expose the multilayered rind of the earth's past, he recognized patterns and forms that were to have meaning for him. In every gully wall and wash, every pinnacle and butte, he was confronted with mystery—the mystery of another time, of another existence.

He set out into the unknown lands with a pick and a specimen bag, following out the formations from one draw to the next, along the twisting course of the White River . . . probing into the clays, the silts, and the volcanic ash, seeking his answers in their texture, nature, and disposition, noting the thickness and sequence of the strata, and relating to these the bits of petrified bone and teeth, the shattered skulls, and the parts of skeletons that lay about him.

The details of Hayden's wanderings after this first trip with Meek into the Badlands are sketchy. We know that he headed north, penetrating further into the Upper Missouri watershed where, among other things, he made the original discovery of dinosaur remains in America. He traveled alone and unarmed, without funds, working his way along on the river boats, studying the land, and prospecting. He handled himself like an Indian, getting about with his needs on his back—a strange, solitary figure known only to the river men, a few trappers, and the Sioux. The Sioux, curious, accosted him on several occasions, and were amazed at his ability to flee and scoop up fossils at the same time. They named him "He-who-picks-up-rocks-running."

Hayden returned to the Badlands in the spring of 1855. Sponsored by his friend, Indian Agent Col. A. J.

Field mess of a Hayden survey team, 1870. Ferdinand Hayden is seated at the far end of the table, facing camera. Photographer W. H. Jackson is standing at far right.

Vaughan, he and his small party blazed a new trail into the area, swinging south from Fort Pierre and then almost due west up the valley of the White River. En route, they stopped at Eagle Nest Butte, a prominent landmark south of the river; climbing its "nearly perpendicular sides," Hayden found, on its summit, Pliocene mammal bones. Not far distant, in pinkish clays, were beasts of a wholly new genus later named *Leptauchenia*, from the fancied resemblance of its teeth to those of a llama (*Auchenia*). No relative of the llama, it belonged to an extinct race of "ruminating hogs" now known as oreodons.

On the north side of White River, low on the outcrops near Ash Grove Spring and Bear Creek in the Badlands proper, Hayden came upon the Titanothere Bed, a cache of some 700 rhino-like ungulates, which he and Meek had named on the previous trip. A little higher the ground was littered with oreodon remains, mingled with the shells of huge land tortoises, some of them four feet long. From this bed the first fossil turtle in North America had been taken in 1849. Tiny jaw elements and a skull marked the first occurrence of fossil rodents in the Badlands. There were bones of a pony-size horse, an early beaver, a new genus of prehistoric rat, and the hippo-like *Hyopotamus*, hitherto unknown in the region.

Slowly, surely, as the geologist pursued his investigations, the answers emerged. The chaos of tumbled rock and bone began to suggest patterns. He was dealing with a succession of time sequences. The ancient life zones bearing the fossils were clues to the order of the rocks—the order, as it were, of hundreds of thousands of years of creation.

It was as simple as ABC, and on that basis he designated them: "A" for the lowest titanothere-bearing sandy clays; "B" for the banded layer yielding the turtles and oreodons; "C" for his supposed *Leptauchenia* zone. Together, he termed them the White River Group. He applied this alphabetical system to the overlying beds on the fringes of the Badlands also, and, in fact, used it throughout his career.

Hayden's geological interpretations of the Badlands have not of course escaped revision. His beds are now known as the Chadron and Brulé formations, and his

The map shows Hayden's journeys into the sawtooth wilderness depicted in the photograph at left. Leaving Fort Pierre (upper right) in 1855, he followed the course of the White River west into the "Mauvais Terres." The 1866 route was a "great circle" west from Fort Randall (lower right, southeast of Fort Pierre) along the Niobrara, north and east through the Badlands, then southeast to his starting point on the Missouri River.

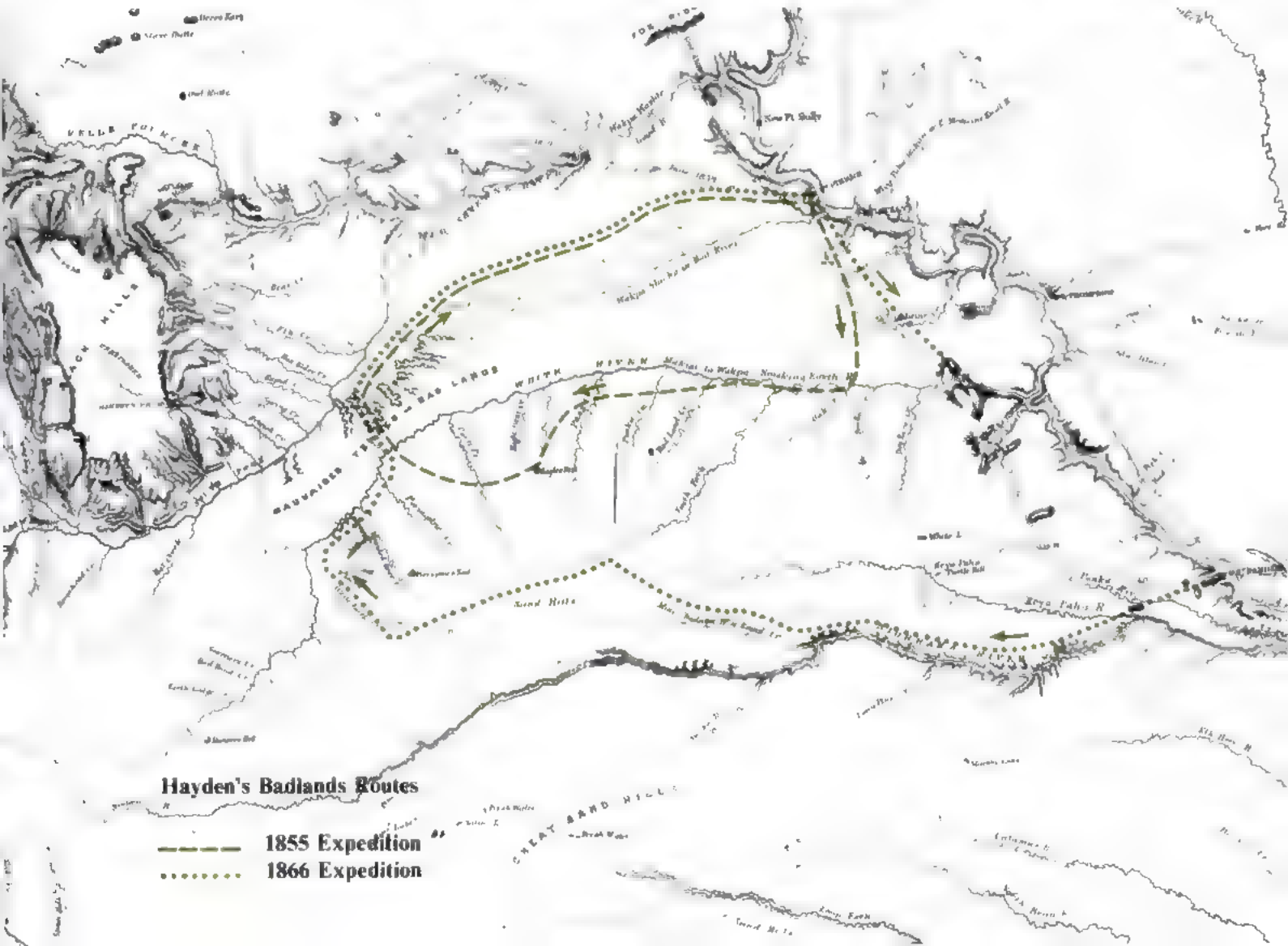
"lake sediments" are now explained as the river and floodplain deposits of an extensive savannah country. They have been assigned to a slightly different age, too, as study of their fossil content has shown relationships with faunal groups elsewhere. But though its elements have been modified and extended, Hayden's general concept endures; his report of 1857, showing for the first time the sequence of rock formation, is still the basic source on the geology of the Badlands.

Hayden's analyses were brief but trenchant; he was the trailblazer, discovering, describing, reflecting, formulating, but always moving on. Whatever the man's faults, they were inherent in his situation. His was the role of the trailblazer—the pioneer who, out of the elements of the unknown, constructs the beginning forms. He saw in broad terms from necessity; with a whole subcontinent awaiting his pleasure, there was little time for mulling over details.

Nor did the developing naturalist intend to explore the subcontinent solely for its dead. Late one February, anxious to observe the arrival of spring on the Dakota prairie, Hayden and his party set out through the snow only to be stopped by a blizzard—but not before they had climbed Bear Butte and made a collection of anemones. Animals delighted him; a red fox was his pet for a time, accompanying him into the Badlands, and once, entranced by the antics of prairie dogs, he camped in a colony of them fifty miles in extent. The breadth and movements of buffalo herds, the whistling of curlews, "antelopes returning to the open prairies from their winter home in the north"—all provoked him to wonder, and were recorded in his notes.

In the decade following his 1855 expedition, Hayden was to see the Badlands only once, and that briefly, coincident with his exploration of the Black Hills as a member of Lieutenant G. K. Warren's topographic survey of 1857 for the War Department. He worked out the broad geologic outlines of the Black Hills that season, determined their domal structure, discovered the first Jurassic beds on the continent on their flanks, and collected fossil evidence to prove the existence of Cambrian strata—those oldest of fossiliferous rocks—west of the Missouri River.

The Civil War found Hayden serving as a surgeon of



volunteers in the Union Army. At war's end, he resigned his commission to accept the chair of Geology and Mineralogy at the University of Pennsylvania, with the proviso that the position not interfere with his western explorations.

These were resumed in 1866. With a zest sharpened by long years away from his work, and funds from the Philadelphia Academy of Science, the avid bone-hunter plunged back into the Badlands; behind him, his outfit—a six-mule team hauling a 1,775-pound wagon, and an escort of five army enlisted men, two Indians, and his assistant, James Stevenson. (Stevenson was to become his executive officer on more ambitious projects in the not-too-distant future and make a name in government service.) For Hayden the old haunts were touched with nostalgia now. Recollection gave them dimension and the early years lent force and meaning to his task.

It was a successful season. When the specimens were totaled up some seven weeks and 600 miles later, they included the remains of the first fossil insectivores from the region, an ancestral pronghorn two feet tall, a collie-sized three-toed horse, camels, bear-dogs and sabre-tooth cats, a large primitive tapir, pig-like enteledonts, the shells of about fifty turtles, and the ubiquitous oreodons, one of them the largest of its kind.

More was to come of the endeavor than bones, however. The specimens, combined with those from the earlier trips of Hayden, Evans, and Culbertson, were destined to make paleontologic history. As was the case with most such material gathered during this period, they were sent for determination to the comparative anatomist Joseph Leidy, of the Philadelphia Academy. His monographic study, *The Extinct Mammalian Fauna of Nebraska and Dakota*, based principally on the Badlands forms, was epochal. It marked the beginning of American vertebrate paleontology as an organized scientific discipline, and at the same time certified Leidy as its founding father—the New World Cuvier.

But Hayden's collecting had no more than "skimmed the pot of time." The publication of Leidy's classic in 1869 launched a migration of paleontologists to the Badlands which has not ceased to the present day. In the years to come, such celebrated bone-diggers as O. C. Marsh, J. B. Hatcher, and J. L. Wortman took from the deposits the largest single array of fossil vertebrates the world has known, representing more than 150 different species.

Hayden's trek into the past was on the main line of the future. His field investigations, coupled with those of the Pacific Railroad Surveys of the 1850's, plus other projects, had powerful impact in stimulating interest in the scientific and economic possibilities of the West. This interest brought an unprecedented demand for information on the region—its mountains, rivers, minerals, timber, grazing lands—which could not be satisfied by existing agencies. What was needed was a scientific field corps operated by the government and organized to secure that information and dispense it in the national welfare.

Hayden's 1866 expedition—coming, as it did, on the rising tide of postwar expansionist policy—played a key role in transforming this interest into political action. When he returned from the field later that year, he was greeted with acclaim—and anticipation. Waiting in Washington were Spencer F. Baird, Assistant Secretary of the Smithsonian Institution, and General John A. "Black Jack" Logan. Baird, an eminent zoologist, but with a canny appreciation of the workings of the federal establishment, functioned as unofficial liaison between the scientific and political branches of government; he had long favored the creation of a federal scientific survey, and now, with Hayden's latest exploit to arouse support, there was a chance of realizing this goal. Logan, then serving as freshman Congressman from Illinois, presided over the Grand Army of the Republic, and stood four-square for economic development of the West.

All that was required was the catalyst—and when that appeared, in Hayden's quiet but intense enthusiasm, Baird and Logan had their man. Hayden possessed the organizing ability and the technical knowledge to head such a survey. He understood the land and its people. And he had vision: he saw the great promise of the West, as the geologic base for our future national development.

In the Congress of 1866-67, on a proposal from Logan, legislation was enacted establishing what was to become known as the United States Geological and Geographical Survey of the Territories—the "Hayden Survey." Through an appropriation for a geological study of the new state of Nebraska, it was given its first infusion of life. Hayden was appointed geologist-in-charge.

For the next 11 years, at a cost of $690,000, Hayden and his men mapped, measured, identified, and collected. Under their eye the West revealed its underlying geologic framework. From Nebraska they moved into Wyoming, and thence throughout the Rocky Mountain region from New Mexico to Montana, from the plains to the Great

Basin. They climbed peaks, located passes, tabulated formations, valleys, and streams. Their stratigraphic determinations gave us our first broad concept of the major time units of the western rock sequences—the Mesozoic, Age of Reptiles, and the Cenozoic, Age of Mammals. Through their explorations, the world came to know of the cliff dwellings of Mesa Verde, and the wonders of Yellowstone, which became our first National Park largely as a result of Hayden's personal efforts. Mineral, timber, and coal lands opened in their wake. Their Third Annual Survey, it was said, triggered the construction of the Denver and Rio Grande Railway.

It was an immense and doubtless soul-satisfying undertaking, this eleven-year probe into the mysteries of the West, but however great the distances Hayden travelled in his later years, the Badlands—the ancient "*Ma-koo-si-tcha*" of the Sioux—were never far away. Etched into his memory, they had become part of his approach to the way he looked at things and thought.

How often he must have thought back . . . Fort Pierre in the springtime . . . preparing for the expeditions . . . May 7th, his departure date for the second trip, in 1855. He had an Indian guide that year, two helpers, horses, and two carts. . . . "The weather was warm, and sun shining brightly," he wrote in his journal:

Most of the usual spring birds had come, and the ravines and water courses were green with grass and foliage of trees, and many flowers were in bloom. The first day's travel [was] quite short, not more than six or seven miles. We passed the steep, barren, Argillaceous hills that surround Fort Pierre, and encamped on the Teton or Bad River of the Sioux. We made about six miles, course southeast. The region drained by this river is quite sterile, the soil much impregnated with what is usually called Epsom salts in this country. In the dry portion of the summer and autumn the stream has no running water, and the bed and sides of the banks become incrusted with this salt; at a distance they seem to be covered with snow. The water standing in pools possesses very active purgative qualities. This substance occurs very abundantly throughout the prairie region, and its medical effect is very similar to that of Epsom salts. Sometimes a very large area of many acres is covered with it, several inches in thickness. I do not know that any analysis has been made of it. It is very fine, and when pure, white as snow, and much the consistency of flour.

The following day we pursued the same direction, over a country having much the same sterile appearance, destitute of water, and camped in an immense depression, called by the traders "Big Hole." In it is the bed of a little stream that empties into the Teton river, but at this time it was nearly dry; the water standing in pools and very unpleasant to the taste. Our wood for culinary purposes was small willows, and our horses picked a scanty meal in the moist ravines. All the upland prairie was parched with drought.

The following day, May 9, we pursued nearly the same direction, and through a similar country, destitute of

Continued on p. 79

The Hayden party of 1871 — the first official scientific expedition into the Yellowstone region.

BALLADS OF THE LITTLE BIG HORN

BY AUSTIN AND ALTA FIFE

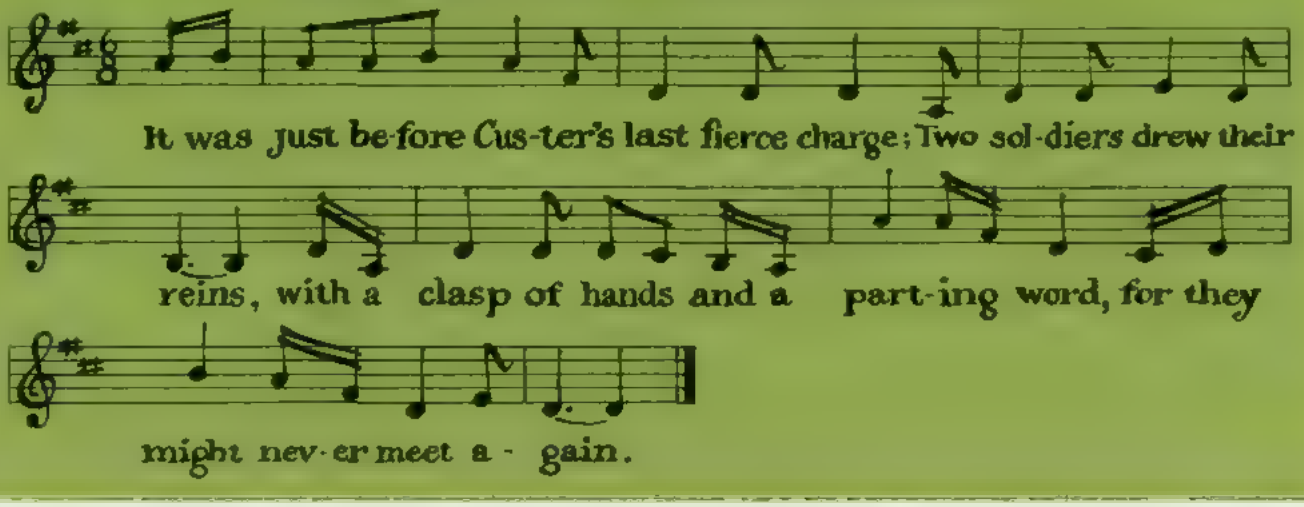
The march of European culture across the North American continent took place in a kind of protohistorical environment. The early West was won largely by men who were only vaguely aware of their role in the stream of history and indifferent, for the most part, to the institutions which "preserve" a traditional way of life. The immediate present was to them more important than the past or the future. Yet those trappers, prospectors, sodbusters, freighters, and cowboys who probed the West with chaotic individuality left the physical residue of their passing in trails and roads trampled into the landscape, tunnels and debris pocking the mountainsides, and rock piles and primitive fences bounding the checkerboards of sod on the plains and in the valleys. More importantly, they left a legacy of folklore to their descendants in anecdotes and stories, legends and tales, proverbs and place names, rhymes and riddles, songs and ballads—lore which preserves the past not as it was, but as it seemed to be in the hearts and minds of men.

For many years the authors have had a particular interest in what they have come to call the "folk and primitive poetry" of the American West. A vast body of verse has been assembled from newspapers, farm and cattlemen's journals, and other popular publications. We have mined the poetic treasures of the W.P.A. Writer's Project, and copied "ballet" books and other handwritten collections made by pioneer women and their descendants. We have recorded the singing of hundreds of songs, and assembled these resources of frontier verse in some fifty bound volumes of field notes and an even greater number of 7-inch magnetic tapes—consisting mostly of songs, but containing also comments on the origin and meaning of the songs, and anecdotes and reminiscences about them and the circumstances with which they deal. We have been guided in our collecting not by prejudgments concerning esthetic beauty or literary excellence, but only by the popularity of the items among the people and by the candor and honesty with which the songs speak of the frontier experience.

Frontier heroes are omnipresent in this literature—not the political figures and eastern tycoons whose stamp upon the West was exercised through policy and corporate enterprise—but the men whose physical presence in the West was felt and admired, or sometimes even hated. First among these were the unnamed adventurers, the scouts and trappers, prospectors and miners, rivermen and lumberjacks, troopers, cowboys, bandits and outlaws, railroad bums and jail birds, venturesome wives and prostitutes. Then there were the particular heroes or villains whose images, however undeserving, have come to embody the ideals, moods, and emotional concerns that struck most deeply into the hearts of westerners: Davy Crockett, Zachary Taylor, Jesse James, Billy the Kid, Belle Starr, Brigham Young—and George Custer.

In 1927 J. Frank Dobie printed a fourteen-stanza ballad, "Custer's Last Charge," and in presenting it insisted that, "Somewhere in print must be more than one ballad on Custer's last fight." We have since been on the lookout for Custer ballads, and the extent to which our efforts have been rewarded is indicated by those that follow. No doubt more will be turned up, but we think that this collection will suffice to show what impact the Little Big Horn disaster and Custer's image have had in popular song and verse.

"CUSTER'S LAST FIERCE CHARGE"


It was just be-fore Cus-ter's last fierce charge; Two sol-diers drew their
reins, with a clasp of hands and a part-ing word, for they
might nev-er meet a - gain.

It was just before Custer's last fierce charge;
Two soldiers drew their reins,
With a clasp of hands and a parting word,
For they might never meet again.

One had blue eyes and dark, curly hair,
Just nineteen years, you know;
With a smile on his lips and down on his chin,
He was only a boy, you know.

The other was tall, dark, daring, and proud,
But his faith in this world was dim;
He only trusted in those he loved,
They were all the world to him.

They had ridden together for many a day
And marched for many a mile,
But never till now had they met the foe
With such a waning smile.

The tall, dark man was the first to speak,
Saying, "Charlie, my time has come.
We'll ride together into the fight,
But you'll ride out alone.

"I have a picture on my breast,
I will wear it in this fight,
A picture that is all this world to me,
And it shines like the morning light.

"Like a morning light was her love to me
To brighten my lonely life.
It is care that has caused her furrowed brow
Since she's been my loving wife.

"Write to her, Charlie, when I am gone;
Send back this fair young face,
And tell her gently how I died
And where's my resting place."

There were tears in the eyes of the blue-eyed boy,
His voice was filled with pain.
"I'll do my comrade's parting wish
If I ride home again.

"But if I should die and you return,
Will you do as much for me?
I have a mother dear at home;
Write to her tenderly.

"She's lost all, one by one,
Husband and sons are gone.
I was the last of all her boys,
But she bravely sent me on."

Just then the order came to charge,
For an instant hand touched hand;
A last good-by and on they rode,
That brave, devoted band.

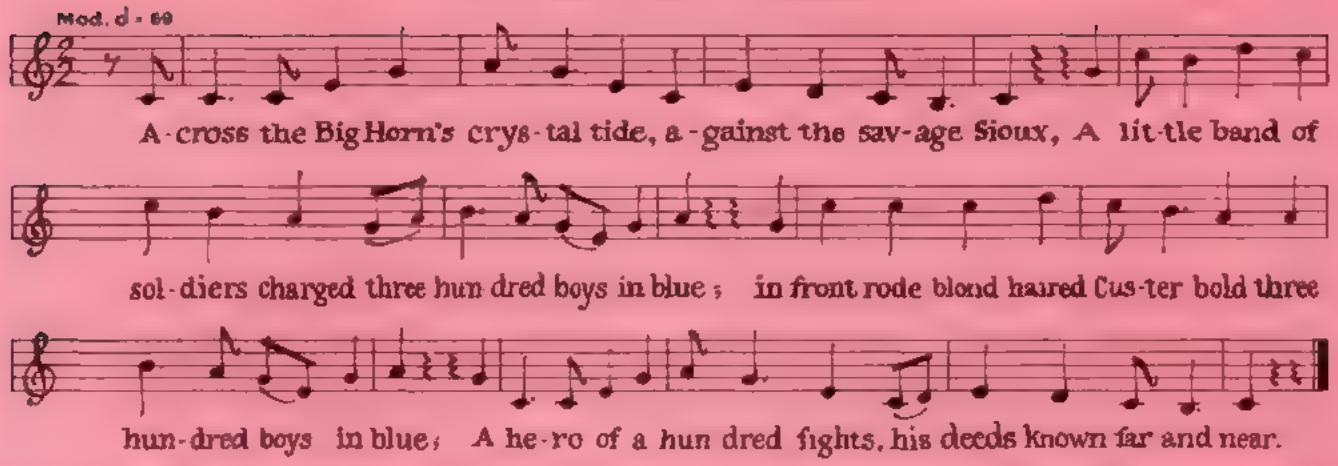
They rode together to the brow of the hill,
But the fight they could not gain,
And the few of those that lived through the fray
Rode slowly back again.

But among the dead that were left behind
Was the boy with the curly hair,
And the tall, dark man who rode by his side
Lay dying beside him there.

Oh, none was left to tell the girl
The words her lover had said,
And the mother waiting at home for her boy
Will learn that he is dead.

The "Custer's Last Charge" published by Frank Dobie was a Civil War ballad, only slightly altered to give it a Little Big Horn setting. Two soldiers, at the moment of engaging in battle, exchange promises to inform the other's nearest and dearest if he should meet a fatal end. Both die, and hence neither mother, sweetheart, nor wife will receive a direct account of the loss. We give the ballad here from a text recorded in Oklahoma by Ethel and Chauncey Moore.

"CUSTER'S LAST CHARGE"


Mod. d - 60
A-cross the Big Horn's crys-tal tide, a-gainst the sav-age Sioux, A lit-tle band of
sol-diers charged three hun dred boys in blue; in front rode blond haired Cus-ter bold three
hun-dred boys in blue; A he-ro of a hun dred fights, his deeds known far and near.

Across the Big Horn's crystal tide,
Against the savage Sioux,
A little band of soldiers charged,
Three hundred boys in blue.

In front rode blond-haired Custer bold,
Pet of the wild frontier,
A hero of a hundred fights,
His deeds known far and near.

"Charge, comrades, charge! There's death ahead,
Disgrace lurks in our rear!
Drive rowels deep! Come on, come on!"
Came his yells with ringing cheer.

And on the foe those heroes charged—
There rose an awful yell,
It seemed as though those soldiers stormed
The lowest gates of hell.

Three hundred rifles rattled forth,
And torn was human form,
The black smoke rose in rolling waves
Above the leaden storm.

The death groans of the dying braves,
Their wounded piercing cries,
The hurling of the arrows fleet
Did cloud the noonday skies.

The snorting steeds with shrieks of fright,
The firearms' deafening roar,
The war song sung by the dying braves
Who fell to rise no more.

O'er hill and dale the war song waved
'Round craggy mountain side,
Along down death's dark valley ran
A cruel crimson tide.

Our blond-haired chief was everywhere
'Mid showers of hurling lead,
The starry banner waved above
The dying and the dead.

With bridle rein in firm-set teeth,
Revolver in each hand,
He hoped with his few gallant boys
To quell the great Sioux band.

Again they charged—three thousand guns
Poured forth their last-sent ball,
Three thousand war whoops rent the air,
Gallant Custer then did fall.

And all around where Custer fell
Ran pools and streams of gore,
Heaped bodies of both red and white
Whose last great fight was o'er.

The boys in blue and their savage foe
Lay huddled in one mass,
Their life's blood ran a-trickling through
The trampled prairie grass.

While fiendish yells did rend the air,
And then a sudden hush,
While cries of anguish rise again
As on the mad Sioux rush.

O'er those strewn and bloodstained fields
Those goading redskins fly,
Our gang went down three hundred souls,
Three hundred doomed to die.

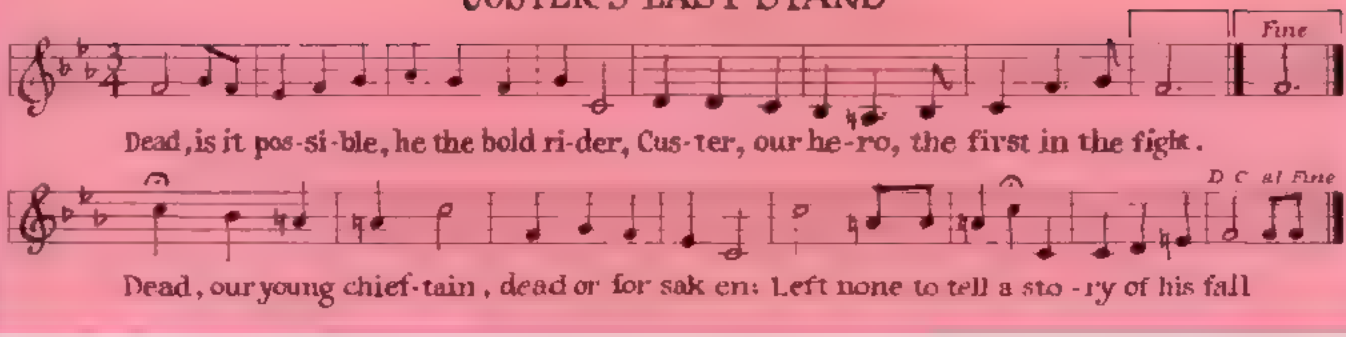
Those blood-drunk braves sprang on the dead
And wounded boys in blue,
Three hundred bleeding scalps ran high
Above the fiendish crew.

Then night came on with sable veil
And hid those sights from view,
The Big Horn's crystal tide was red
As she wound her valleys through

And quickly from the fields of slain
Those gloating redskins fled—
The blond-haired Custer held the field,
A hero with his dead.

This gripping ballad was recorded in Central Valley, California in 1938 by Sydney Robertson from the singing of Wade H. Ford. Mr. Ford said he learned it from Robert and Charles Walker, "who copied it from the Custer Monument in 1906." We have corresponded with custodians of Custer monuments in Wyoming, Montana, and New York without finding one with a ballad inscription. The song, as rendered by Ford, has subsequently been released on a Library of Congress long-playing record, and published by Botkin. Custer and his troops are idealized in moving and artistic images with a melody that reinforces the tragic and idealizing moods of the verses. Moreover, we have not identified it as an imitation of any other song.

"CUSTER'S LAST STAND"


Fine
Dead, is it pos-si-ble, he the bold ri-der, Cus-ter, our he-ro, the first in the fight.
D C al Fine
Dead, our young chief-tain, dead or for sak en: Left none to tell a sto-ry of his fall

Dead! It is impossible? He, the bold rider,
Custer, our hero, the first in the fight,
Charming the bullets of yore to fly wider
Shunning our battle king's ringlets of light!
Dead! Our young chieftain and dead all forsaken!
No one to tell us the way of his fall!
Slain in the desert and never to waken,
Never, not even to victory's call.

Comrades, he's gone; but ye need not be grieving;
No, may my death be like his when I die
No regrets wasted on words I am leaving
Falling with brave men and face to the sky.
Death's but a journey, the greatest must take it;
Fame is eternal and better than all;
Gold though the bowl be, 'tis fate that must break it
Glory can hallow the fragments that fall.

Proud for his fame that last day he met them!
All the night long he had been on their track,
Scorning their traps and the men that had set them,
Wild for a charge that should never give back.
There on the hill top he halted and saw them,
Lodges all loosened and ready to fly;
Hurrying scouts with the tidings to awe them
Told of his coming before he was nigh.

All the wide valley was full of their forces
Gathered to cover the lodges' retreat
Warriors running in haste to their horses,
Thousands of enemies close to their feet!
Down in the valleys the ages had followed,
There lay the Sitting Bull's camp for a prey.
Numbers? What recked he? What recked those who followed?
Men who had fought ten to one ere that day?

Out swept the squadrons, the fated three hundred,
Into the battle line ready and full;
Then down the hillside exultingly thundered
Into the hordes of old Sitting Bull!
Wild Ogalallah, Arapahoe, Cheyenne,
Wild Horse's braves and the rest of their crew
Shrank from that charge like a herd from a lion,
Then closed around that great hell of wild Sioux.

Right to their center he charged and then facing
Hark to those yells? And around them O see!
Over the hill tops the devils came racing
Coming as fast as the waves of the sea!
Red was the circle of fire about them
No hope of victory, no ray of light
Lo, through that terrific black cloud without them
Brooding in death over Custer's last fight.

Then, did he blanch, did he die like a craven
Begging those torturing fiends for his life?
Was there a soldier who carried the Seven
Flinched like a coward or fled from the strife?
No, by the blood of our Custer, no quailing!
There in the midst of the devils they close,
Hemmed in by thousands, but ever assailing
Fighting like tigers, all bayed amid foes!

Thicker and thicker the bullets came singing
Down go the horses and riders and all;
Swiftly the warriors around them were ringing,
Circling like buzzards awaiting their fall,
See the wild steeds of the mountain prairie,
Savage eyes gleaming from forest of mane,
Quivering lances with pennons so airy;
War-painted warriors charging amain.

Backward, again, and again they were driven,
Shrinking to close with the lost little band
Never a cap that had worn the bright Seven
Bowed till it's wearer was dead on the strand.
Closer and closer the death circle growing,
Ever the leader's voice, clarion clear,
Rang out his words of encouragement glowing
"We can die once boys, but sell your lives dear!"

Dearly they sold them like berserkers raging,
Facing the death encircled them round,
Death's bitter pangs by their vengeance assuaging,
Marking their tracks by their dead on the ground
Comrades, our children shall yet tell their story
Custer's last charge on old Sitting Bull
And ages shall swear that the cup of his glory
Needed but that death to render it full.

"Custer's Last Stand" comes to us from the manuscript collection of Mrs. Stella Hendren of Kooskia, Idaho. It has also been recorded by Ellen Stekert in a very defective text from the singing of Ezra Barhight in New York. His melody is given. Barhight said he put his own tune to words he found in *Barngey's Fourth Reader*. The ballad was written by a British emigrant, Frederick Whittaker, who also authored many "dime novels" popular in the last half of the nineteenth century. Here, idealization of the blond boy-general and his troop is exuberant, unrestrained, baroque. The poet even seems to forget that the battle was a military blunder and a dismal tragedy. Indeed, we have all over again the mood of the "Song of Roland" and his tragic defeat at the hands of the Saracens!

Continued on p. 86

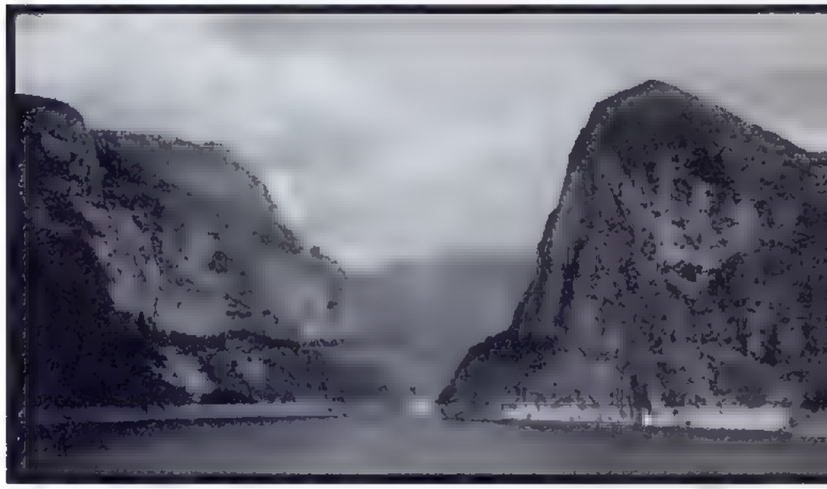
Hetch Hetchy in 1910

THIS IS A NATIONAL PARK . . .

. . . This is how a part of Yosemite Park once looked—and how it looks today, seventy-seven years after it was reserved as a legacy to future generations It is called Hetch Hetchy. Long ago some said that it rivaled Yosemite Valley in beauty and exceeded it in charm.

Others said that Hetch Hetchy was potentially more useful as a reservoir, and would be much prettier as a lake. And so the city of San Francisco was permitted to turn the valley into a department of its water works.

In the article beginning on the next page, "The Case of the Hard-Nosed Conservationists," Richard Reinhardt examines one side of a current struggle which dates back to the controversies over Hetch Hetchy in the years 1905-1913. Hetch Hetchy was dammed up because it seemed a cheaper source of water than the many reasonable alternatives. Today, even more questionable economic considerations are said to require further damming of the Colorado and the flooding of portions of the Grand Canyon.



Hetch Hetchy today

Even if the accountants and engineers did have their figures straight when they turned Hetch Hetchy Valley into a reservoir, was what they did a wise use of an irreplaceable resource? Against

Continued on p. 53

THE CASE OF THE HARD-NOSED CONSERVATIONISTS

BY RICHARD REINHARDT

No one denies it was a shocking series of advertisements.

"Only You Can Save Grand Canyon from Being Flooded . . . ."

"Should We Also Flood the Sistine Chapel? . . ."

"The Grand Canyon Is in Danger. *The Grand Canyon!*"

Such statements caused a stir from Washington to San Francisco when they appeared in newspapers and magazines last year. A Congressman stood up with trembling jowels and flashing eyes to denounce them as inflammatory, irresponsible, and ill-conceived.

But it was not the language alone that agitated the cloakrooms of the Capitol and the breakfast tables of New York. It was the sponsor — the Sierra Club of San Francisco, a benign, 75-year-old conservation organization, better known for pack trips than for propaganda, a non-profit organization, non-political, and what is more, tax-exempt.

Ever since it was founded in 1892 to fight off an invasion of commercial enterprises that were gnawing at Yosemite, the Sierra Club has campaigned to protect the American wilderness. But its ammunition in the past has generally been limited to resolutions of the board of directors, circulated somewhat furtively by a few thousand loyal club members huddled in northern California. To nonmembers, it has appeared to be primarily a band of rosy-cheeked rock-climbers, keen on parks and sour on logging, who sponsor weekend hikes and winter holidays at a kibbutz-like ski lodge, where everybody helps out with the cooking, dances the schottische, and sleeps in big, overheated dormitories that smell of damp wool and boot grease — not at all the sort of group that one would think of as an iron-fisted power bloc.

In recent years, however, the Sierra Club has turned increasingly pugnacious. So militant has it become in defense of our natural resources that it has tramped on well-shod toes, bloodied public faces, and thereby raised an issue of deep importance to every private organization that dares to take a stand on controversial matters of public policy: how far can a tax-exempt organization go in pursuit of its ideals? Should the government take away the Sierra Club's tax privileges?

The aggressive attitude of the Sierra Club developed in reaction to the growing pressure of technology on a disappearing wilderness. A number of people — including past presidents William Siri and Edgar Wayburn, and conservation director Michael McCloskey — helped shape this reaction into an active ideology. But the man who dominates and energizes the Sierra Club crusade is white-haired, 53-year-old David Brower, a passionate outdoorsman who has been executive director since 1952.

In a picture story last May, *Life* Magazine called Brower "the country's No. 1 working conservationist . . . Knight Errant to Nature's Rescue." It was scarcely an exaggeration, for Brower is a mystic and compulsive conservationist with a profound faith in the generative powers of unspoiled nature and an almost messianic zeal to preserve the wilderness for future generations.

"We must see that something untrammeled and free remains in the American earth as living testimony that our generation had love for the next," he said not long ago. "In wilderness, the world gets put to its own music again. Wipe out wilderness and the world's a cage."

Unlike many ruminative conservationists, who are as taciturn as they are woodsy, Brower feels that nothing is accomplished by silent homage to nature. He believes in evangelism, and he exhorts his listeners to wage a "battle of words for the earth," to rebuild respect for the natural environment. Although the word "conservation" leaves him cold ("It's sort of dull and sounds a bit self-righteous"), he thinks it can be infused with new meaning.

"We'll see it not as a word to pay lip service to, or as a dull thing that's no fun, or a shelf of books in the library, talking about benefit-cost ratios, resource budgets, and input and output of energy, all flavored with Smokey the Bear and a distaste for forest fires. We'll see conservation instead as an attitude in everything we do, as an ethic, as conscience in our behavior toward our environment."

For Brower, the promptings of this environmental conscience are as demanding as a religious vow. Raised

Continued on p. 54

Continued from p. 51

the argument that San Francisco needed Hetch Hetchy water for its future growth, William E. Colby of the Sierra Club said in 1910, "The fact is that travel to the Yosemite National Park is increasing so rapidly that fifty years from now no one can conceive of the multitude that will throng to it for rest and recreation. . . ."

No multitude throngs to Hetch Hetchy, "improved" as it is by a lake that fluctuates by 200 vertical feet or more. On Friday, May 13, 1955, when Philip Hyde took the photograph below, there were 1600 people in Yosemite Valley (and there might have been 30,000 had it been Memorial Day weekend); there were just two hard-nosed conservationists at Hetch Hetchy, documenting a disaster.

What **did** San Francisco do with all that money it saved those many years ago?

The photographs on this page show about the same area of the valley as it was and as it is today—but looking *in different directions*. The two views on the preceding pages are a precise "before-and-after" pair.

Continued from p. 52

as a town boy in Berkeley, California, he learned to love the mountains on family trips and plunged into the outdoor activities of the Sierra Club in his early twenties. He was a member of almost every committee the club offered — rock-climbing, editorial, visual education, conservation — and even worked as a part-time, paid employee for a while before World War II. During the War, he trained rock-climbers in the Army's 10th Mountain Division; and, afterwards, he was back climbing and skiing and lecturing with the club again.

In between climbs up the side of Ship Rock and slaloms down the slopes of Norden Hill, Brower wrote articles for magazines. He was working as an editor at the University of California Press when the Sierra Club hired him as its first full-time executive fourteen years ago. At the time, the club had 7200 members.

It was not particularly surprising that Brower, with his sense of crisis, his skill in writing, and his faith in the persuasive power of words, would have led the Sierra Club into the wonderful world of propaganda. He began cautiously, then moved with remarkable zeal straight into the field he knew best: book publishing. In 1960, when the board of directors agreed to publish *This Is The American Earth*, a superbly designed volume of Ansel Adams' photographs, the club had never put out anything more ambitious than the monthly *Bulletin*, some trail guides and maps, and a few handbooks on skiing, mountaineering, and nature study. These were written, as a rule, in the lingo of the *afficionado* and were aimed primarily at the club's own members.

The Ansel Adams book was something else. It was intended not only to make money for the club's conservation program, but also to win new converts to the cause. In both respects it was gratifyingly successful. It set a pattern for a series of "Exhibit Format" books, all handsomely bound and expensively printed, with luminous photographs and poetic, transcendental texts. They have survived and even flourished in an intensely competitive market where volumes of pretty pictures bloom like poinsettias at the holiday season. The club's gross profit from book sales in 1965 was more than $700,000, and its inventory of books in print had a retail value of more than $1,200,000.

The best seller of the series, a 168-page volume called *In Wildness Is the Preservation of the World*, is a collection of deeply moving color photographs by Eliot Porter, illustrating the words and spirit of Henry David Thoreau. Several established book publishers had turned down the project because of the formidable cost of high quality and full-color printing. The Sierra Club has sold more than 50,000 copies at $25 each, and you find the flawless prints of pond weed and ferny dells in well-furnished offices all over the country.

While the book was in production, the club sent Porter to photograph the haunting rock formations and elusive colors of Glen Canyon. Before his work was finished, the Federal Bureau of Reclamation moved ahead with its plans to dam the canyon, and the book appeared in 1963 as a sort of memorial to the frail beauty of a lost cause: *The Place No One Knew: Glen Canyon on the Colorado.*

With the success of these volumes, the club was committed to the publishing business. The "Exhibit Format" grows by two or three volumes a year, while historical and regional books appear in less elaborate editions—the Olympic Peninsula, Storm King Mountain, the Point Reyes Seashore, Yosemite.

The "Exhibit Format" now includes *Words of the Earth*, with text and photographs by Cedric Wright; *These We Inherit*, with 42 memorable photographs of American parklands by Ansel Adams; *The Last Redwoods*, by Philip Hyde and Francois Leydet; *Ansel Adams: I—The Eloquent Light*, a photo-biography by Nancy Newhall; *Time and the River Flowing: Grand Canyon*, by Francois Leydet; *Gentle Wilderness: The Sierra Nevada*, with text by John Muir and photographs by Richard Kauffman; *Not Man Apart* [The Big Sur Coast], with poetry by Robinson Jeffers; *The Wild Cascades*, by Harvey Manning, with poetry of Theodore Roethke; *Everest: The West Ridge*, by Dr. Thomas Hornbein and the American Mount Everest Expedition; and *Summer Island: Penobscot Country*, by Eliot Porter. This year (1967) the club is scheduled to publish a new Philip Hyde book, *Navajo Wildlands: As Long as the Rivers Shall Run*, and Robert Wenkam's color essay, *Kauai and the Park Country*.

Although some conservative members continue to look on book publishing as a peculiar diversion for an outdoor organization, few can deny that the venture has contributed to the strength and prestige of the club. The "Exhibit Format" has won more than a dozen prizes for graphic excellence, including the publishing industry's Carey-Thomas award for "the best example of creative publishing" in 1964.

The chief object of the series is not artistic, however. In a catalogue blurb for Eliot Porter's new book on the

Continued on p. 85

DISEÑOS

Westward, Ho!
For Oregon And California!

Who wants to go to California without costing them anything? As many as eight young men, of good character, who can drive an ox team, will be accommodated by gentlemen who will leave this vicinity about the first of April. Come, Boys! You can have as much land as you want without costing you anything. The government of California gives large tracts of land to persons who have to move there.

G. Donner and Others

This advertisement appeared for a number of weeks in the *Sangamo Gazette* of Springfield, Illinois, in the early months of 1846, and it voiced a powerful appeal. *Free* land in California? That was a lot better than a man could get in the States. It had been only five years since Congress had finally passed a Homestead Law that would give a settler title to 160 acres of the unsurveyed public domain, subject to a payment of $1.25 per acre; yet the Mexican government was giving away land in California, even to Yankees, apparently without limit.

There were all sorts of rumors and propaganda abroad during that winter and spring, as well as dreams of glory, of fame, of power, and above all, of land—broad rolling acres whose abundance would make a gentleman of a ploughboy or a United States Senator of a crossroads lawyer. There were beguiling voices: letters in St. Louis newspapers, lectures, even books, which told vividly of California's great potential, particularly for the enterprising who would come there—*now*. For example, there was a certain L. W. Hastings, who had been lecturing all over the

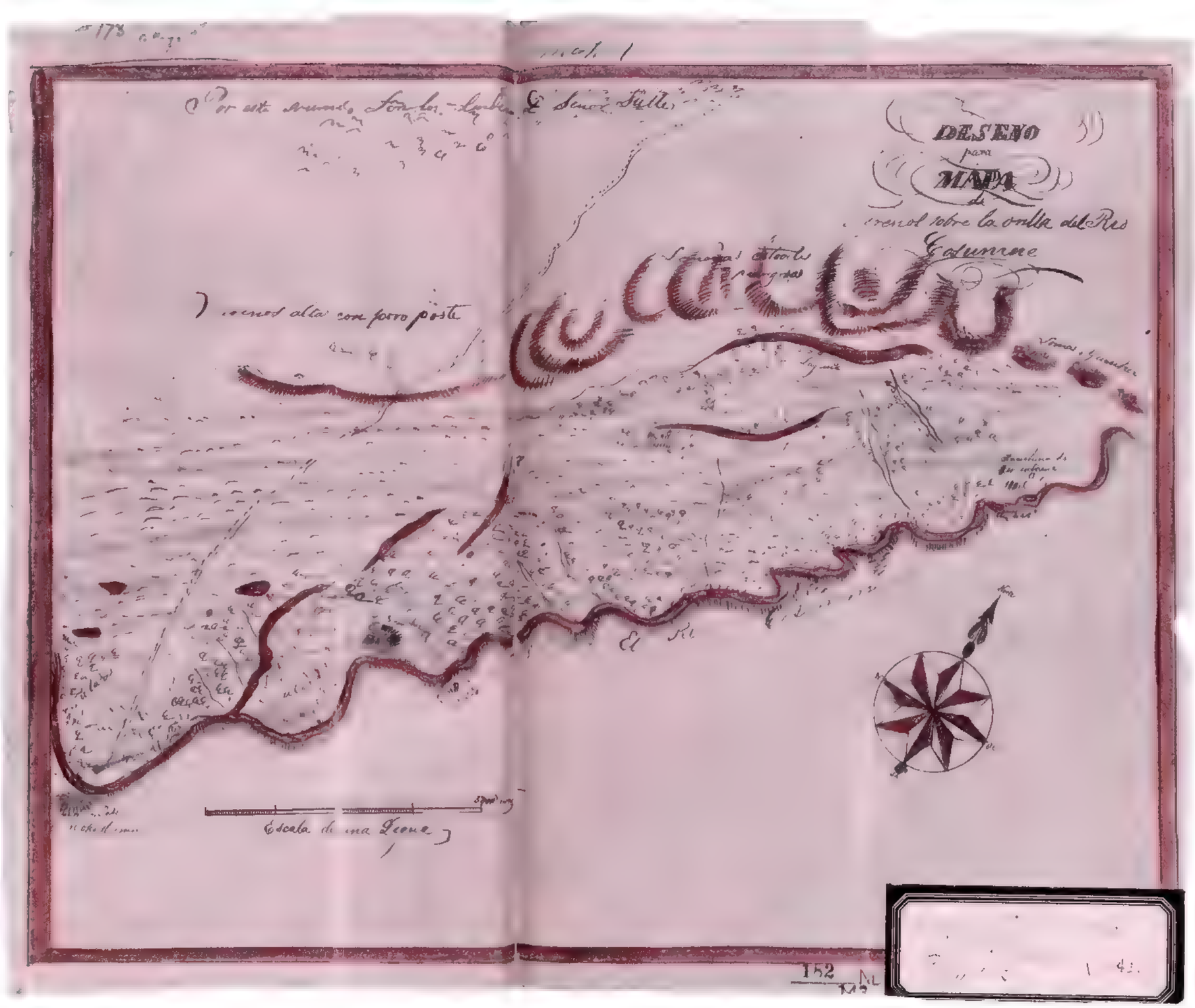
Laguna de Temecula, *from which this rancho took its name, was later called Lake Elsinore. Julian Manriquez received the 14,000-acre grant in 1844; in 1851 his widow sold it for $4,125.*

States that winter. Hastings had been to California, and he wrote and spoke of it eloquently; he had just published a book he called *The Emigrants' Guide to Oregon and California*. As it turned out, his statements sometimes depended more on hope than on observed fact, but they made enthralling reading:

Large tracts of land are given to each emigrant, averaging from one to eleven square leagues [a Mexican league equals 2.6 miles; a square league, 4400 acres], the quantity depending upon the number of members composing the applicant's family, and his means of improving, by building, fencing or otherwise. In order to obtain a grant of land, it becomes necessary for a foreigner, first to make an application for naturalization, then to present a petition addressed to the governor, praying for a grant of the land which he may have selected, and, of which he, at the same time, presents a general map, representing its extent and surface. Any person arriving in that country is at liberty to take any lands which are not taken, or which have not been applied for, even without making

Continued on p. 59

For about one mile, north from the crossing of the Cosumnes River between Stockton and Sacramento, U.S. Highway 99 follows the western boundary of Rancho Omochumnes, granted to Jared Sheldon in 1843. The highway crosses at the point marked Rancho y Passo los Mokelumne, *heading north into rolling country, inaccurately described on the diseño as* Terenos altas con poco pasto, *and* Lomerias esteriles pedregosas: *High land with little pasturage, and rocky, infertile hills.*



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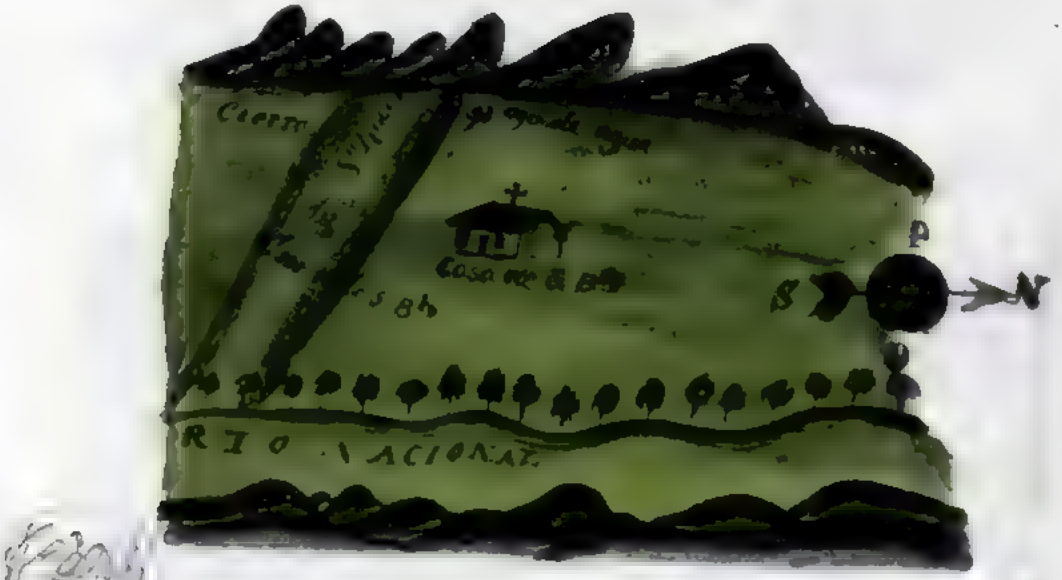
SELLO QUINTO UN REAL.

Habilitado provisionalmente para la Alcabala marítima del puerto de Monterey en el Departamento de las Californias, para el año de mil ochocientos cuarenta y uno.

Manuel Castañares



any application for that purpose, but in such case, he is liable to be dispossessed at any time, by the lands being regularly applied for, by another. All those who emigrated to that country, with me, settled in that manner, and made some extensive improvements, without having made an application for a title, yet they all designed to make their application, in due time.

Since that time, hindsight has dealt roughly with Hastings, particularly for having made much of an unknown cutoff south of Salt Lake that contributed to the tragic fate of G. Donner and Others. The significance of his *Emigrants' Guide* lay primarily in its description of California and its attractions; the account of the route is so cursory as to be meaningless:

The most direct route, for the California emigrants, would be to leave the Oregon route, about two hundred miles east from Fort Hall; thence bearing west southwest, to the Salt Lake; and thence continuing down to the bay of St. Francisco . . .

Unfortunately, the California that Hastings described did not exist. The emigrants of 1846 were greeted at Sutter's Fort by the armed forces of the United States. They found that the U.S. Army, the U.S. Navy, and Lieutenant Colonel Frémont ruled California. At times, there was a question as to which of the three was really in charge, but certainly the laws of the Republic of Mexico no longer applied, and the laws of the United States were not yet completely in force.

There was no free land.

There was no land open for homesteading; and, worst of all, the good land, the fertile, well-watered, valley land along the rivers, was already private property. Isolated, remote, California had nonetheless been the home of Europeans for 75 years — nearly three generations — and more recently had seen the arrival of numbers of runaway sailors, obscure adventurers, and young men on the make from the Atlantic States and Europe. Each of them owned, or claimed to own, vast stretches of a countryside occupied by herds of half-wild long-horned cattle, an occasional grizzly, and a few shy Indians.

In this instance, Hastings had been correct, or nearly so. The Mexican Colonization Law of 1824 prescribed grants of from one to eleven leagues, that is, from 4,400 to nearly 50,000 acres. The formalities were simple in California, but included the requirement of Mexican citizenship by birth or naturalization, and citizenship required at least nominal profession of faith in the Catholic Church. The Mexican government based its policy on the need to populate the vacant regions of the north. Admittedly, this policy had led to revolution and establishment of an independent republic in Texas. Nevertheless, the governors of California were most generous to foreigners; by the summer of 1846, naturalized foreigners had received 2,845,000 acres out of a total of 13,000,000 granted. In the Sacramento Valley, 58 grantees included 41 foreigners who claimed 1,000,000 acres from the 1,830,000 in private hands. For the emigrants of 1846, this was irony indeed. The principal inducement for coming to California in the first place—free land—had evaporated, and until such time as the laws of the United States could be brought into force, until the United States and Mexico were at peace again, the newcomers could legally acquire land only by purchase. Moreover, until claims to land under the Mexican government would be confirmed by the United States, such a venture was a risky one indeed. Colonel R.B. Mason, military governor of California in 1849, reported to Washington that the titles to much of the land were questionable, if not completely fraudulent, and the speculators had already begun to acquire property with a view to selling it to new settlers at exorbitant profits. To be sure, a special U.S. agent, William Carey Jones, sent out to investigate and report on this very situation, viewed the matter more optimistically; still there was to be an unfortunate ring to the term "Mexican title" for decades to come.

The Mexican Law of Colonization of 1824 had been the basic instrument for the establishment of land titles in California. Indeed, the twenty-odd grants made during the period of Spanish dominion were confirmed by later Mexican governors, and became in effect Mexican rather than Spanish grants. The law of 1824 and the clarifying Regulation of 1828 provided the method of disposing of the public domain. Grants of land were to be limited in extent: "No one person shall be allowed to obtain the ownership of more than one square league of irrigable land, four leagues of land dependent upon the seasons, and six for the purpose of rearing cattle." Since virtually all the grants in California were for the purpose of raising cattle, this limitation was construed to mean that no individual should receive more than eleven leagues in a single grant.

The process as specified by the Law of 1824 and the Reglamento of 1828 began with a petition, wherein the author addressed the Governor with a request for title to a specific tract of

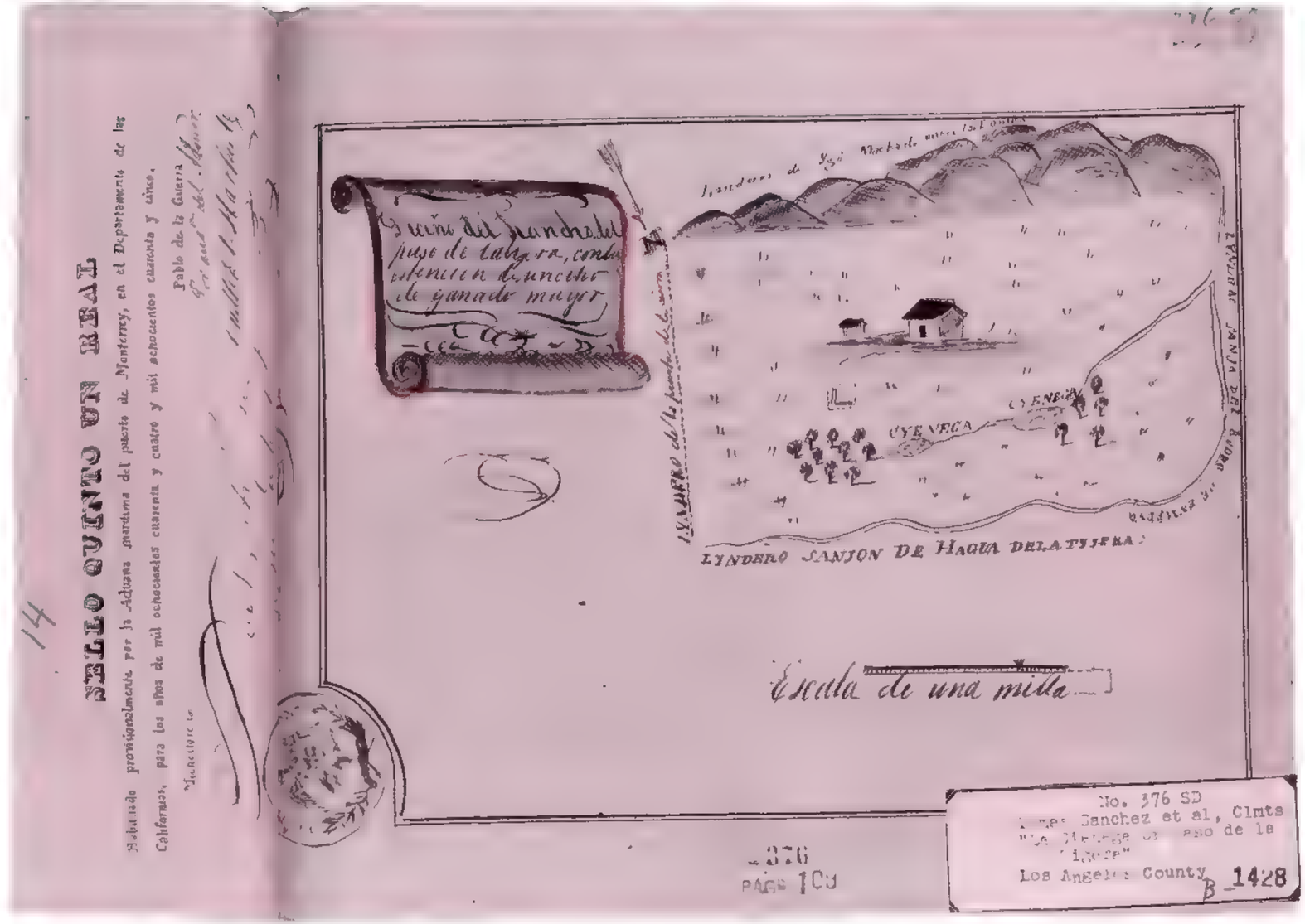
Rancho San Benito, originally developed by Mission San Antonio, became the property of Francisco Garcia in 1843. The rancho straddled the Salinas River (Rio Nacional) south of today's King City.

land, generally described by means of a sketch-map, or *diseño*. Several hundred diseños, or traced copies of them, are to be found in the land grant records on deposit at the Bancroft Library. It was up to each petitioner to supply his own sketch. This he drew himself if he had the skill, but more often he depended on some more talented friend. The media are ink, pencil, watercolor, crayon, and combinations of these. Some are radically stylized and others are crude and truly primitive. Many of the depictions are similar to maps drawn in 16th- and 17-century Mexico. As the examples show, they possess a charm and vitality that reflect some of the nature of backwoods California.

Most petitions followed a simple form: the petitioner would cite his Mexican citizenship by birth or naturalization, and his services to the nation, if any; he would invariably describe the land as being vacant and available. Having received the petition, the Governor would refer it to a local official for a report as to the accuracy of the petitioner's statements. If the report, called the *informe*, was favorable, the Governor would order his secretary to prepare the official titles paper, which contained a number of provisions the grantee was obliged to carry out in order to perfect his title. Generally, it was required that the land granted be occupied within twelve months, and that a dwelling be erected and inhabited before the end of that period; the land might be fenced, but without prejudice to public roads; and the grantee was obliged to obtain from his magistrate the act of juridical possession, which in theory would define and measure the boundaries. The process of locating and measuring the rancho boundaries required the presence of the new owner, the neighboring rancheros, the officiating magistrate, and his assistants. The whole party, once assembled, determined the direction and distances satisfactory to all by riding down those lines where there were possibilities for later disagreement. At the conclusion of the ceremony, the magistrate formally indicated to the grantee his possession of the land, and the latter took symbolic possession by pulling up clumps of grass, breaking the branches of trees or bushes, and throwing rocks in the four cardinal directions, thus indicating that as owner he could do things to the land that would not be permitted to another.

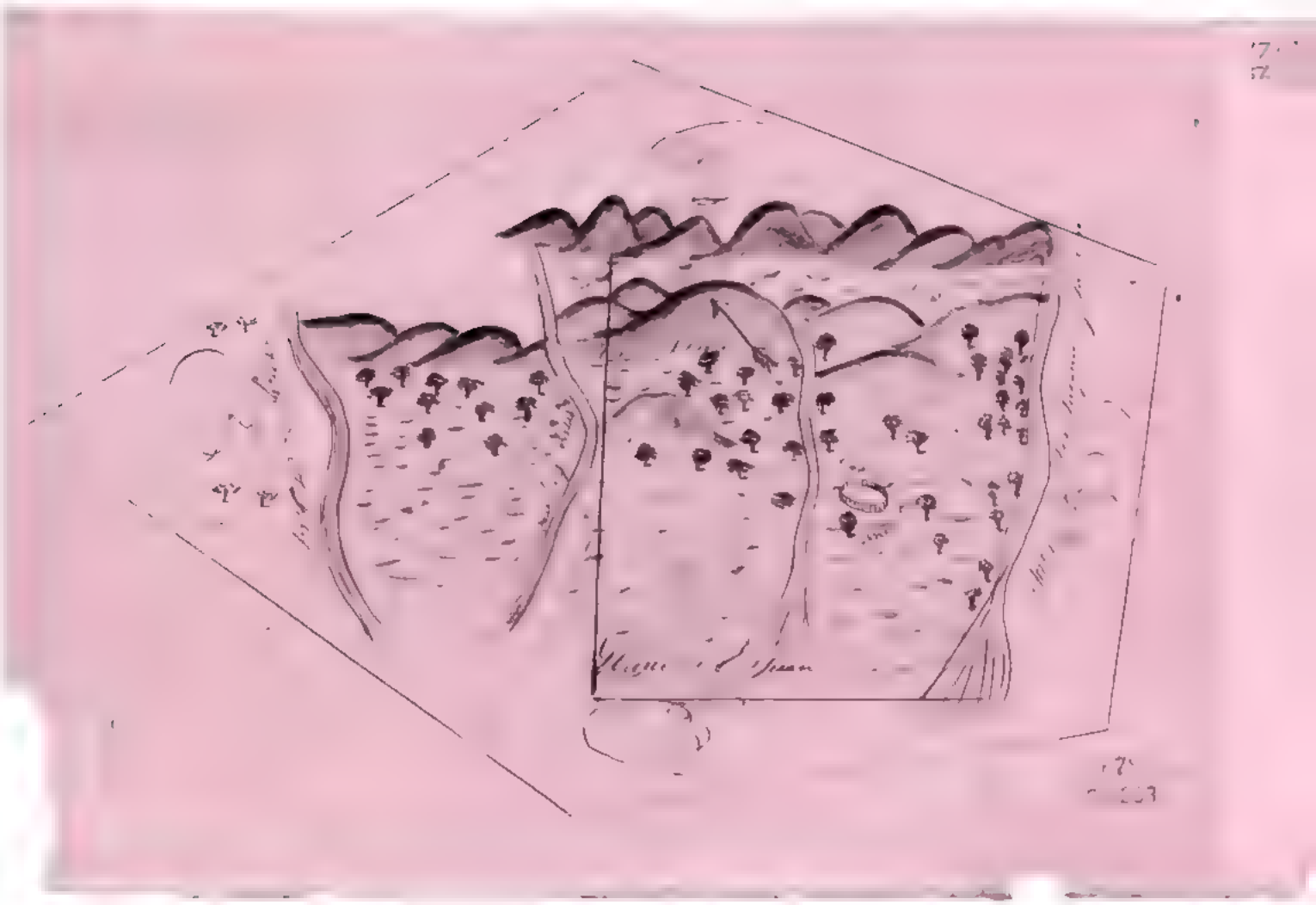
As examples of the procedures and legal forms, let us examine the claim of Lt. José Rafael Gonzalez, whose charming diseño of his Rancho San Miguelito de la Trinidad is reproduced on the cover. Gonzalez had fought in the Mexican Wars of Independence, coming later to California to 1833 with Governor Figueroa. In subsequent years he served in various official capacities. U.S. Consul Thomas O. Larkin described him as a man of landed property and cattle as well as Third Officer of the Monterey Customs House, of some note and influence, quiet and unobtrusive.

In 1841, Gonzalez had addressed a petition to Governor Juan Bautista Alvarado, citing first his long military service beginning in 1810, second his advanced age (he was then 53), and third his broken health and need for "some final settlement so as to be enabled to rest from his troubles of fatigue." In point of fact, Gonzales lived for another 29 years, dying in Monterey in 1868. The land that he asked for had formerly comprised


SELLO QUINTO UN REAL
Habilitado provisionalmente por la Aduana marítima del puerto de Monterey, en el Departamento de las Californias, para los años de mil ochocientos cuarenta y cuatro y mil ochocientos cuarenta y cinco.
Pablo de la Guerra
Lindero de Ygno Machado entre las Lomas
Escala de una milla
CIENEGA
LINDERO SANJON DE HAGUA DELA TYJERA
No. 376 SD
Los Angeles County
376
PAGE 1 Cy

Vicente Sanchez received his formal grant to Rancho La Cienega in 1843, after occupying it for twenty years. The well-watered tract supported at one time from two to three thousand head of cattle on less than five thousand acres.

The land included in Rancho La Cienega is situated on the west side of Los Angeles, east of Culver City. About half of the rancho lay in the Baldwin Hills, with La Cienega Boulevard now forming the western boundary, and Slauson Avenue the southern. In the hills Rancho La Cienega met the corner of Rancho La Ballona of Agustin and Ignacio Machado, as indicated on the diseño: Lindero de Ygno Machado entre las Lomas. *The diseño was drawn on sealed (official) paper, validated by William E. P. Hartnell.*



Rancho San Joaquin of Cruz Cervantes lay at the edge of the hills northeast of the present town of Hollister. In 1850, Cervantes was reported to own an adobe house valued at $1,000, 300 head of cattle, 2 yoke of oxen, 1 mares, 100 sheep and 5 saddle horses. (The legal difficulties of Cervantes are recounted on page 95.)

children agreed to the sale of their portion of the rancho, which consisted of "a house which they own in the place known as San Miguelito by donation made to them by the Government, . . . consisting of seventeen *varas* [48 feet] front and nine [25 feet] in depth, of adobe and roof of tiles, all greatly deteriorated; equally ceding to the said Gonzalez their right to a piece of land of four hundred *varas* square [28 acres] on which is situated the said house . . "

The sale price was agreed to be $150. $100 in goods at market prices, and $50 in cash.

In the meantime, Governor Alvarado had issued the grant in favor of Gonzalez:

Whereas Don José Rafael Gonzales, a native Mexican, has solicited for his personal benefit and that of his family the land known by the name of San Miguelito, bounded on the North by the *Portezuelo*, on the South by the seashore, on the East by the *Agua del Gavilan* . . . and on the West by the Sierra known as Las Piedras, the previous measures having been taken and requisite investigations made agreeably to the laws and regulations, I have, in the name of the Mexican Nation, and in virtue of the authority in me vested, granted to him the above mentioned land, declaring to him the ownership thereof by these presents, subject to the approbation of the Most Excellent Departmental Assembly, and to the following conditions:

1st. He may enclose it without prejudice to the crossings, highways, and easements; he shall enjoy it freely and exclusively, destining it to the use or cultivation which may best suit him, but within a year he shall build a house and it shall be inhabited.

2nd. He shall solicit of the respective magistrate the judicial possession thereof in virtue of this title, whereby the boundaries shall be traced out, in the limits of which he shall put, besides the landmarks, some fruit trees, or wild ones of some utility.

3rd. The land of which donation is made consists of five *sitios de ganado*

Continued on p. 92

ABOUT THE AUTHORS

Roger Olmsted, editor of *The American West,* and **Robert A. Weinstein,** graphics editor, have often before combined their efforts in the study and presentation of western photographic history.

William Brandon, currently in the English Department of the University of Massachusetts, has appeared twice before in *The American West* (Winter, 1965, and Spring, 1965). He is author of *The Men and The Mountains* (1955), *The American Heritage Book of Indians* (1961), and the forthcoming *The Santa Fe Trail* for McGraw-Hill's "American Trails Series."

James E. Serven, an alumnus of Phillips Andover Academy and Brown University, once served as editor of *Building Age* magazine. He has written much about weaponry and its influence on American history. He is author of *Colt Firearms* (5th printing) and *The Collecting of Guns,* is a regular contributor to outdoor and gun magazines, and has authored for "The Westerners" *Military Posts on Sonoita Creek,* and *Guns on the Arizona Frontier* for the Arizona Pioneer's Historical Society.

Arrell Morgan Gibson is Professor of History and Curator of Western History Collections at the University of Oklahoma. Author of five books, including *Life and Death of Colonel Albert Jennings Fountain* (Norman, 1965), and numerous articles on the West, he is collaborating with Ed Bearse for the University of Oklahoma Press on a military history of Fort Smith and its role in taming the Southwestern frontier.

Gilbert F. Stucker specializes in vertebrate paleontology at the American Museum of Natural History in New York. Two recent expeditions to British Columbia, sponsored by the American Museum and the National Museum of Canada, and placed in his charge, had Hayden overtones; the party operated a hundred miles from the nearest post office, and exclusively by horse. His interest in the Hayden surveys took hold while working for the National Park Service.

Austin and **Alta Fife** have done research on the folklore of the West since the 1930's. Their field notes comprise some fifty volumes, and they have authored many articles on Mormon and western folklore, as well as two books: *Saints of Sage and Saddle: Folklore Among the Mormons* (Indiana University Press, 1956), and *Songs of the Cowboys* (Clarkson N. Potter, 1966). Mr. Fife is Chairman of the Department of Languages and Philosophy at Utah State University, Logan.

Richard Reinhardt, whose "Tapeworm Tickets and Shoulder Strikers" appeared in the Fall, 1966, number of *The American West,* is a former member of the Sierra Club and a free lance writer who has written extensively on the subject of public affairs and conservation for such publications as *San Francisco Magazine* and *Cry California,* the conservationist quarterly.

Robert H. Becker is Assistant Director of the Bancroft Library at the University of California, Berkeley. He has written *Diseños of California Ranchos* (The Book Club of California, 1964), and edited *Some Recollections of a California Governor* (Sacramento Book Collectors Club, 1959). His forthcoming book will be an edited overland diary and guidebook of 1850 (with daily route maps) entitled *Thomas Christy's Road Across the Plains.*

T.H.Watkins is Managing Editor of *The American West* and a sometime specialist in the field of western technological history.

had a population bound to her by the strongest ties—a population better, freer, more virtuous, independent and public spirited than any great city the world has ever seen.

To say that "Power is constantly stealing from the many to the few," is only to state in another form the law that wealth tends to concentration. In the new era into which the world has entered since the application of steam, this law is more potent than ever; in the new era into which California is entering, its operations will be more marked here than ever before. The locomotive is a great centralizer. It kills little towns and builds up great cities, and in the same way kills little businesses and builds up great ones. We have had comparatively but few rich men; no very rich ones, in the meaning "very rich" has in these times. But the process is going on. The great city that is to be will have its Astors, Vanderbilts, Stewarts and Spragues, and he who looks a few years ahead may even now read their names as he passes along Montgomery, California or Front streets. With the protection which property gets in modern times—with stocks, bonds, burglar-proof safes and policemen; with the railroad and the telegraph—after a man gets a certain amount of money it is plain sailing, and he need take no risks. Astor said that to get his first thousand dollars was his greatest struggle; but when one gets a million, if he has ordinary prudence, how much he will have is only a question of life. Nor can we rely on the absence of laws of primogeniture and entail to dissipate these large fortunes so menacing to the general weal. Any large fortune will, of course, become dissipated in time, even in spite of laws of primogeniture and entail; but every aggregation of wealth implies and necessitates others, and so that the aggregations remain, it matters little in what particular hands. Stewart, in the natural course of things, will die before long, and being childless, his wealth will be dissipated, or at least go out of the dry goods business. But will this avail the smaller dealers whom he has crushed or is crushing out? Not at all. Some one else will step in, take his place in the trade, and run the great money-making machine which he has organized, or some other similar one. Stewart and other great houses have concentrated the business, and it will remain concentrated.

Nor is it worth while to shut our eyes to the effects of this concentration of wealth. One millionaire involves the existence of just so many proletarians. It is the great tree and the saplings over again. We need not look far from the palace to find the hovel. When people can charter special steamboats to take them to watering places, pay four thousand dollars for the summer rental of a cottage, build marble stables for their horses, and give dinner parties which cost by the thousand dollars a head, we may know that there are poor girls on the streets pondering between starvation and dishonor. When liveries appear, look out for bare-footed children. A few liveries are now to be seen on our streets; we think their appearance coincides in date with the establishment of the almshouse. They are few, plain and modest now; they will grow more numerous and gaudy—and then we will not wait long for the children—their corollaries.

But there is another side: we are to become a great, populous, wealthy community. And in such a community many good things are possible that are not possible in a community such as ours has been. There have been artists, scholars, and men of special knowledge and ability among us, who could and some of whom have since won distinction and wealth in older and larger cities, but who here could only make a living by digging sand, peddling vegetables or washing dishes in restaurants. It will not be so in the San Francisco of the future. We shall keep such men with us, and reward them, instead of driving them away. We shall have our noble charities, great museums, libraries and universities; a class of men who have leisure for thought and culture; magnificent theatres and opera houses; parks and pleasure gardens.

We shall develop a literature of our own, issue books which will be read wherever the English language is spoken, and maintain periodicals which will rank with those of the East and Europe. The *Bulletin*, *Times* and *Alta*, good as they are, must become, or must yield to, journals of the type of the New York *Herald* or the Chicago *Tribune*. The railroads which will carry the San Francisco newspapers over a wide extent of country the same day that they are issued, will place them on a par, or almost on a par in point of time, with journals printed in the interior, while their metropolitan circulation and business will enable them to publish more and later news than interior papers can.

The same law of concentration will work in other

businesses in the same way. The railroads may benefit Sacramento and Stockton by making of them workshops, but no one will stop there to buy goods when he can go to San Francisco, make his choice from larger stocks, and return the same day.

But again comes the question: will this California of the future, with its facilities for travel and transportation; its huge metropolis and pleasant watering places; its noble literature and great newspapers; universities, libraries and museums; parks and operas; fleets of yachts and miles of villas, possess still the charm which makes Californians prefer their State, even as it is, to places where all these things are to be found?

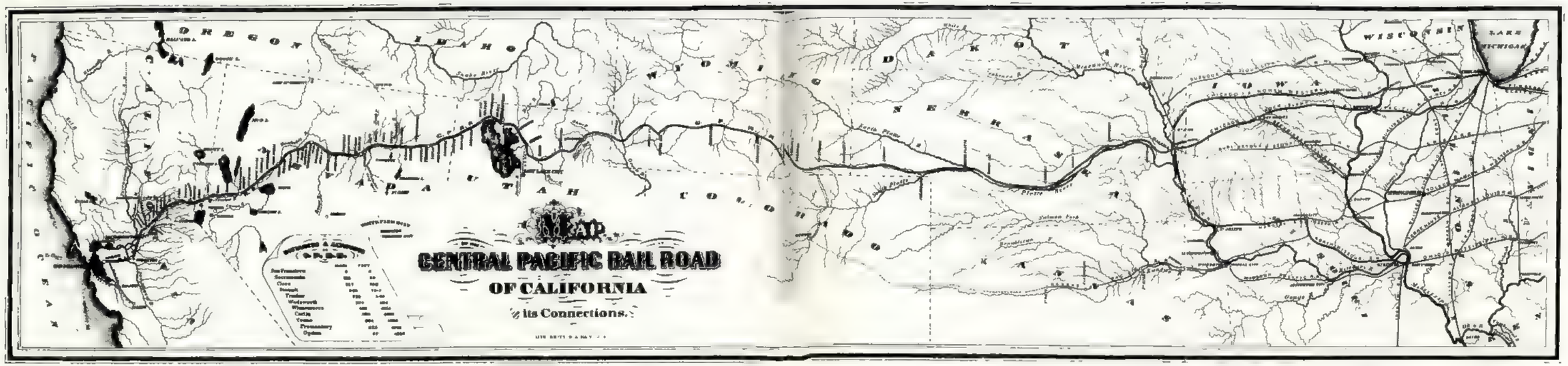
What constitutes the peculiar charm of California, which all who have lived here long enough feel? Not the climate alone. Heresy though it be to say so, there *are* climates as good; some that on the whole are better. Not merely that there is less social restraint, for there are parts of the Union—and parts from which tourists occasionally come to lecture us—where there is much less social restraint than in California. Not simply that the opportunities of making money have been better here; for the opportunities for making large fortunes have not been so good as in some other places, and there are many who have not made money here, who prefer this country to any other; many who after leaving us throw away certainty of profit to return and "take the chances" of California. It certainly is not in the growth of local attachment, for the Californian has even less local attachment than the average American, and will move about from one end of the State to the other with perfect indifference. It is not that we have the culture or the opportunities to gratify luxurious and cultivated tastes that older countries afford, and yet those who leave us on this account as a general thing come back again.

No: the potent charm of California, which all feel but few analyze, has been more in the character, habits and modes of thought of her people—called forth by the peculiar conditions of the young State—than in anything else. In California there has been a certain cosmopolitanism, a certain freedom and breadth of common thought and feeling, natural to a community made up from so many different sources, to which every man and woman had been transplanted—all travellers to some extent, and with native angularities of prejudice and habit more or less worn off. Then there has been a feeling of personal independence and equality, a general hopefulness and self-reliance, and a certain large-heartedness and open-handedness which were born of the comparative evenness with which property was distributed, the high standard of wages and of comfort, and the latent feeling of everyone that he might "make a strike," and certainly could not be kept down long.

While we have had no very rich class, we have had no really poor class. There have been enough "dead brokes," and how many Californians are there who have not gone through that experience; but there never was a better country to be "broken" in, and where almost every man, even the most successful, had been in the same position, it did not involve the humiliation and loss of hope which attaches to utter poverty in older and more settled communities.

In a country where all had started from the same level—where the banker had been a year or two before a journeyman carpenter, the merchant a foremast hand; the restaurant waiter had perhaps been educated for the bar or the church, and the laborer once counted his "pile," and where the wheel of fortune had been constantly revolving with a rapidity in other places unknown, social lines could not be sharply drawn, nor a reverse dispirit. There was something in the great possibilities of the country; in the feeling that it was one of immense latent wealth; which furnished a background of which a better filled and more thoroughly developed country is destitute, and which contributed not a little to the active, generous, independent social tone.

The characteristics of the principal business—mining—gave a color to all California thought and feeling. It fostered a reckless, generous, independent spirit, with a strong disposition to "take chances" and "trust to luck." Than the placer mining, no more independent business could be conceived. The miner working for himself, owned no master; worked when and only when he pleased; took out his earnings each day in the shining particles which depended for their value on no fluctuations of the market, but would pass current and supply all wants the world over. When his claim gave out, or for any reason he desired to move, he had but to shoulder his pick and move on. Mining of this kind developed its virtues as well as its vices. If it could have been united with ownership of land and the comforts and restraints of home, it would have given us a class of citizens of the utmost value to a republican state. But the "honest miner" of the placers has passed away in California. The Chinaman, the mill-owner and his laborers, the mine superintendent and his gang, are his



successors.

This crowding of people into immense cities, this aggregation of wealth into large lumps, this marshalling of men into big gangs under the control of the great "captains of industry," does not tend to foster personal independence—the basis of all virtues—nor will it tend to preserve the characteristics which particularly have made Californians proud of their State.

However, we shall have some real social gains, with some that are only apparent. We shall have more of home influences, a deeper religious sentiment, less of the unrest that is bred of an adventurous and reckless life We shall have fewer shooting and stabbing affrays, but we will have probably something worse, from which, thank God, we have hitherto been exempt—the low, brutal, cowardly rowdyism of the great Eastern cities. We shall hear less of highway robberies in the mountains, but more, perhaps, of pickpockets, burglars and sneak thieves.

That we can look forward to any political improvement is, to say the least, doubtful. There is nothing in the changes which are coming that of itself promises that. There will be a more permanent population, more who will look on California as their home; but we would not aver that there will be a larger proportion of the population who will take an intelligent interest in public affairs. In San Francisco the political future is full of danger. As surely as San Francisco is destined to become as large as New York, as certain is it that her political condition is destined to become as bad as that of New York, unless her citizens are aroused in time to the necessity of preventive or rather palliative measures. And in the growth of large corporations and other special interests is an element of great danger. Of these great corporations and interests we shall have many. Look, for instance, at the Central Pacific Railroad Company, as it will be, with a line running to Salt Lake, controlling more capital and employing more men than any of the great eastern railroads who manage legislatures as they manage their workshops, and name governors, senators and judges almost as they name their own engineers and clerks! Can we rely upon sufficient intelligence, independence and virtue among the many to resist the political effects of the concentration of great wealth in the hands of a few?

And this in general is the tendency of the time, and of the new era opening before us: to the great development of wealth; to concentration; to the differentiation of classes; to less personal independence among the many and the greater power of the few. We shall lose much which gave a charm to California life; much that was valuable in the character of our people; while we will also wear off defects, and gain some things that we lacked.

With our gains and our losses will come new duties and new responsibilities. Connected more closely with the rest of the nation, we will feel more quickly and keenly all that affects it. We will have to deal, in time, with all the social problems that are forcing themselves on older communities (like the riddles of a Sphinx, which not to answer is death), with one of them, the labor question, rendered peculiarly complex by our proximity to Asia. Public spirit, public virtue, the high resolve of men and women who are capable of feeling "enthusiasm of humanity," will be needed in the future more than ever.

A great change is coming over our State. We should not prevent it if we could, and could not if we would, but we can view it in all its bearings—look at the dark as well as the bright side, and endeavor to hasten that which is good and retard or prevent that which is bad. A great State is forming; let us see to it that its foundations are laid firm and true.

Let us not imagine ourselves in a fools' paradise, where the golden apples will drop into our mouths; let us not think that after the stormy seas and head gales of all the ages, *our* ship has at last struck the trade winds of time. The future of our State, of our nation, of our race, looks fair and bright; perhaps the future looked so to the philosophers who once sat in the porches of Athens—to the unremembered men who raised the cities whose ruins lie south of us. Our modern civilization strikes broad and deep and looks high. So did the tower which men once built almost unto heaven.□

"What the Railroad Will Bring Us" has been reprinted from the *Overland Monthly*, vol I, no. 4 (October, 1868). Portions of pages 299 and 300 of the original have been deleted, since the references in those portions are purely local in emphasis. In October of 1868, most of California's jackpot population anticipated the completion of the transcontinental railroad with a speculator's glee. Henry George's pungent opinions on the so-called blessings of progress couldn't puncture California's ballooning optimism, of course, but a good many of the measured perceptions set down in this article blossomed to wonderful effect in the pages of *Progress and Poverty* ten years later.

The Revoloidal Spindle *continued*

rapid rate, but the obstructions of the gas pipes prevented it." The *Bulletin* did not speculate on what might have happened had the hydrogen-filled bag ruptured on one of the numerous gaslight fixtures in the huge building.

While the Avitor continued its daily displays, including an occasional outside performance on the Recreation Grounds, the Aerial Steam Navigation Company went forward with plans for a full-scale machine. It opened subscription lists to its capital stock, selling it at a price of $25 a share. Within a few days, 225 shares had been sold, and the proceeds were put into the "Building and Construction Fund." The later sale of $100 shares

was less successful, but bids were nevertheless invited for the construction of an Avitor 150 feet long and 40 feet wide, with propellers 16 feet across, the whole thing to be powered by a five-horsepower steam engine whose weight, including water boiler and all connections, was supposed to be 430 pounds. Marriott, in the meantime, utilized the columns of his *News Letter* to promote the fortunes of the enterprise. One of his schemes was a poetry contest, the winner of which was none other than Bret Harte with "Avitor (An Aerial Prospectus)." The last two stanzas of this classic went as follows:

> My other failures let me pass:
> The dire explosions, and alas!
> The friends I choked with noxious gas.
> Avitor!
> For lo! I see perfected rise
> The vision of my boyish eyes
> The messenger of upper skies.
> Avitor!

Bret Harte went on to better things. Not so fortunate was the Aerial Steam Navigation Company. The financial panic of the 1870's, together with the already proven reliability of the earthbound transcontinental railroad, took the gas out of the Avitor's bag, so to speak, and the great machine was never built. The Avitor Hermes, Jr., that "stately little fellow," either met with high winds one day and was hopelessly wrecked, or burned—accounts vary. Frederick Marriott turned his attention to heavier-than-air craft, and in the 1880's designed what he called an "aeroplane," possibly the first use of that term to describe a flying machine. His 1883 application for a patent on this device, ironically, was turned down on the grounds of "impossibility."

Both Porter and Marriott were wrong, of course. Neither the New Yorker's 800-foot bag nor the Englishman's more modest 150-foot one could have been made light enough with the materials then available; it would not be until the development of lightweight metals that such massive structures as they envisaged could be built. Still, for all the fact that their dreams came to nothing, one cannot suppress a sneaking admiration for Porter and Marriott and their grand designs. Their fault lay less in their dreaming than in their timing, which was off by several decades. It would be a long time before revoloidal spindles or wondrous avitors might be seen swooping about the mountains and the prairies, startling wild horses and setting off galloping antelopes—but the day did come, and in that fact is their vindication. □

Understandably enough, Porter and Marriott have not come under intensive discussion in histories of aviation. Nevertheless, they have been mentioned, most notably in Kenneth M. Johnson's *Aerial California, an Account of Early Flight in Northern and Southern California, 1849 to World War I* (Los Angeles, 1961). Aeronaut Porter's promotional booklet, *Aerial Navigation . . .* was reprinted in 1935 by Lawton Kennedy of San Francisco, with an introduction by Lieutenant-Commander H. V. Wiley, who examined the legitimacy of Porter's contentions. They were more valid, generally, than might have been expected in 1849, although entirely unworkable just the same. The *Report* of the Aerial Steam Navigation Company (San Francisco, 1869) contains much intriguing information, among which is the fact that the company actually sold at least $5,615 worth of stock in the venture before its collapse. Marriott's tinkering in and about the Montgomery Block is mentioned in considerable detail in Idwal Jones, *Ark of Empire* (New York, 1951).

Most of the San Francisco newspapers took some note of Marriott's Avitor, but the *Alta California* was one of the few to point out the fact that neither a gas bag nor a steam engine could likely be developed with a sufficiently low weight-to-horsepower ratio to make the transcontinental Avitor practical.

Bernalillo County *continued*

world, as delicate as a distant echo, and Jeff would get up and swing on his steeldust horse again and we would ride home. I stayed in the saddle on Buddy, because I wasn't too sure I'd be able to get back aboard him again without a lot of trouble that would be embarrassing.

Jeff seldom said anything. Once he told me his steeldust horse wouldn't let anyone else ride him. I suppose now that he was warning me in case I had any ideas about stealing a ride on him. At the time I thought he was only stating an objective fact, and I always treated the steeldust horse with great respect. Aside from that, and "Let's go!" and an occasional "Sure" in answer to some question, I can't remember Jeff saying anything, except very rarely. One of the last times we rode up on the mesa he made a remark voluntarily. I thought I was big enough then to dismount, too; so I did, and sat down on the warm sand and looked at the valley. Jeff, after a while, celebrated the occasion by making an observation about the view we had gone up there so often to see. He said, "Sure is quiet."

Jeff's father lived with him. He was a stumpy old man, bald-headed, and he always wore a flat-crowned hat. He

called it a Texas hat. I know that he felt undressed without his hat, because one time when he had come down to our place to help out in some crisis, and my mother asked him to come in for a cup of coffee, he said he couldn't because he had come in such a hurry he hadn't brought his hat.

Cal and I went to a one-room school a mile or so away, although while we were there another room was added on. There were comparatively few Anglos among the pupils, and in the lower grades lessons were taught in both English and Spanish. At recess and at noon hour the bigger kids who had ridden horses to school rigged up makeshift bucking straps with burrs and ropes and had rodeos. I didn't like to participate because I didn't like to stick Buddy in the flanks with burrs and because I'd just as soon have kept it confidential that I was the sorriest rider in the school's history. It was ignominious to prove it in front of the girls. Another occupation at recess was hunting horned toads. They would weep tears of blood, and since we all believed in *brujas*, or witches, those miraculous tears were awesome and moving and gave rise to metaphysical discussions.

We learned to swim in an *acequia madre*, a mother irrigation ditch. Hollywood can have its blue-tiled, kidney-shaped pools, clear and sparkling, and the Cote d'Azur can have its sapphire Mediterranean, and you can even have your shade-dappled old swimming hole down the creek, but give me my muddy *acequia* on a desert-hot day, with José and Jesús and Maria and Cal, and our big old dog Turk chasing a water snake, and a watermelon waiting in the cool under the bank to be busted when we got out.

Old Turk was killed by a rattlesnake one August day when we were exploring along the bed of the Rio Grande. We were there because we'd been told to keep away, with fearsome stories of quicksand, and Turk got killed, and it was a lesson to us. Rattlesnakes were said to be blind during dog days, when they were shedding their skins, and at that time they would strike without warning.

I think people in a big empty country get a special kind of affection for it. I think most of the people there, grown-ups as well as the kids, even those who didn't particularly want to be cowboys, felt more than an ordinary tenderness for the sunburnt land and the blazing sky around them. They didn't rhapsodize about it and you wouldn't expect them to, any more than you'd expect the Queen of England to walk along striking matches on her thumbnail. But sometimes something was said.

One graduation day at school, or rather evening, when parents came and various unlucky pupils had pieces to speak, José, dressed up in his narrowest overall pants and a black sateen shirt, was waiting for his turn to recite. While he was waiting he was looking out the window at nighthawks sailing against the last ivory color of the afterglow. The teacher called on him and he didn't hear her, so she snapped him to. Then more kindly, since parents were present, she asked him what he had been dreaming about. José said with a flashing smile, "I was watching a bird fly." He explained it seriously, and as if he expected everyone to understand, and everyone seemed to understand.

Nighthawks always make me think of New Mexico. □

Guns of the Canadian West *continued*

better quality than the trade guns ordinarily found in that area.

The nineteenth century also brought to the Canadian West a series of internal difficulties that fostered an increasing military involvement. This resulted in further additions to kind and quality of firearms that made their way into the western provinces. The eastern-based Canadian Army entered the century armed with the traditional "Brown Bess" flintlock musket, but in succeeding years these were replaced by a variety of caplock and breech-loading rifles. Of these latter two types, we find in the records at Canadian Armed Forces headquarters the following models, with the dates issued:

1855—Enfield muzzle-loading caplock rifle. Caliber .577
1864—"Long Enfield" muzzle-loading rifle. Caliber .577
1866—"Short Enfield" rifle with sword bayonet. Caliber .577
1867—Westley Richards breech-loading rifle. Caliber .45
1867—Snider-Enfield breech-loading rifle. Caliber .577

The Canadian Army purchased and issued a number of American-made .56-50 caliber Spencer and .50-60 caliber Peabody rifles in 1867, but later replaced them with Snider-Enfield single shot rifles. These Snider-Enfield guns were developed much as were our single shot .50-70 "trap-door" Springfields, and were merely a con-

version of the old Enfield muzzle-loaders, employing a laterally hinged breech into which a metallic cartridge could be inserted.

By the 1860's, both Manitoba and British Columbia had been admitted into the Dominion of Canada, and with greater control being exercised even over wilder-nesses of the Northwest territories, immigration into the Canadian West increased rapidly. In addition to the problems already created by the presence of the Western Indians, the growing influx of Protestant settlers gave rise to active resentment on the part of a colony of Catholic Métis (French and Indian half-breeds) situated in the Red River Valley of Manitoba, who feared en-croachment on their already limited holdings. In 1869, the Métis, under the leadership of Louis Riel, allied themselves with some equally dissatisfied Indians and initiated an abortive revolt. The rebellion was quickly put down, and Riel was deported.

The peace was short-lived. In the early 1870's, the Métis and Indians once again became surly, a state of affairs made worse by unscrupulous Montana whiskey peddlers, who sent a fat stream of liquor into the North-west territories. Lawlessness spread over a land that for many years had known the peaceful coexistence of In-dians, half-breeds, and white traders.

Faced with the need for prompt action, the Dominion Government formed a mounted constabulary force in 1873; as it was to serve primarily within the Northwest Territories, it was first called The Northwest Mounted Police (NWMP).

Col. George A. French, heading this newly created force, pushed across the prairies in 1874 with 275 men, all armed with the Snider hinged-breech carbines of .577 caliber, carried in a "bucket" to the rear of the right leg. For a time in later years, carbines were carried in a leather sling at the saddle horn. For side arms, a six-shot caliber .450 English revolver made under the Adams patent was carried in a holster on the left side, butt to the front, and attached to a plain brown leather belt which also supported a bullet pouch. One of the charac-teristics common to the NWMP sidearm was a swivel in the butt to which a lanyard cord could be attached. The lanyard cord was worn over the shoulder and prevented the officer from losing or being forcibly separated from his revolver.

The Adams revolvers initially issued arrived from Eng-land in bad condition, and some members of the force obtained the more efficient big Smith & Wesson .44 caliber revolvers in which quick ejection of cartridges and reloading were accomplished by the "break-open" action of a hinged barrel and cylinder section.

Proving as unsatisfactory as the Adams revolver, the Snider single shot carbines were replaced by the Win-chester Model 1876 full-stock carbines. The first lot of 100 was issued in 1878. These repeaters were designed with the unusual feature of a stock extending full-length under the barrel, while most rifles and carbines of the period employed a fore-stock that extended only a short distance forward from the breech and were called "half-stock" guns.

In 1884 Louis Riel returned from exile, and the un-stable situation that had given birth to the NWMP reached a point of climax when the now organized Métis rebels attacked a force of Mounted Police and Vol-unteers on March 26, 1885, killing twelve and opening the floodgates of a bitter struggle. Within a month of the outbreak of fighting, 3000 militiamen had been transported westward from the eastern provinces to join the NWMP. Most of these men were armed with the big .577 caliber Snider-Enfield breech-loading rifles, the 1885 government issue of Martini-Henry rifles having pro-ceeded only to the extent of providing this newer .450 caliber gun for fifty of the 90th Battalion's "Black Devils."

When the Northwest Mounted Police had first moved into the prairies they had dragged with them to Fort Macleod two heavy 9-pounder muzzle-loading iron field guns and two small brass mortars. Later, four bronze 7-pounders had been brought out to Fort Walsh. Into this Métis-Indian-Canadian war went these big guns. Equally important, there were two .45-70 crank-operated, fast-shooting American Gatling guns.

The Gatling gun, invented by Dr. Richard J. Gatling, was something new and fearsome, described by one writer as "a terrible gun that shoots all day!" It had a cluster of revolving barrels that were rapidly rotated and fired by the operation of a crank. Detachable magazines fed cartridges into the mechanism as fast as the crank could be turned, making possible an almost steady stream of fire very much like that of the modern machine gun. These monsters were in the thick of things, playing a vital role in the course of the fighting with Riel. It was perhaps the most effective use made of the Gatling gun on the North American continent.

Led by General Strange, the militiamen and Mounted Police engaged the main force of rebels at Batoche. In

this four-day battle, 51 rebels were killed and 173 wounded. The Canadian casualties were 8 killed and 46 wounded. Riel was captured and hanged. The bloodiest Indian outbreak in Canadian history was broken.

In the years following the Riel Rebellion, the Canadian West underwent a period of furious development, aided by the completion of its own transcontinental railroad, the growth of large-scale ranching, and a series of mining discoveries—climaxed by the discovery of vast quantities of Klondike gold in 1898. The hapless Northwest Mounted Police found itself sitting on a powder keg in a country suddenly alive with every level of society. In May of 1898, the Royal Regiment of Canadian Infantry, forming into what was called the Yukon Field Force under Lt. Col. T. D. B. Evans, was sent to help the Northwest Mounted Police maintain order.

The Canadians had gladly stacked their old .577 Snider-Enfield guns and replaced them with .450 caliber Martini-Henry rifles in 1885. An improved model known as the Martini-Metford replaced the Martini-Henry in 1893. In 1896, the long Lee-Enfield Mark I rifles in .303 caliber became the official issue. These long rifles, along with some carbines for the N.C.O., were brought to the Yukon by Lt. Col. Evans' field force, which also brought along two fast-shooting Maxim machine guns. With this armament, the military force and Mounted Police checked lawlessness in the Far North.

Such were the guns—the tools and the weapons—which helped open and settle the far reaches of the Canadian West. Many of the makes and models discussed here are no longer in existence, but others have survived to become the darlings of collectors, who have amassed some impressive gatherings, public and private. Among the most interesting are the collections at the Glenbow Foundation in Calgary and at the Regina headquarters of the Northwest Mounted Police.

A collection especially representative of the Canadian West was assembled some years ago by a lawyer in Alberta; unfortunately, it is now dispersed. While the shotguns and military shoulder arms of this collection were preponderantly English, the handguns were about equally divided between Old World and U.S. manufacture. The sporting (hunting) rifles were mainly of U.S. origin, with Sharps, Remingtons, Spencers, and Winchesters well represented. It should be remembered that after the Civil War supply routes to the Manitoba-Saskatchewan-Alberta areas were opened from our border territories; St. Paul became an important distribution point. Thus, it was often easier and cheaper for settlers in the Canadian West to obtain weapons made in New England rather than in Old England or in eastern Canada.

Throughout the three easternmost provinces of the Canadian West, one usually finds the "working weapons"—those plainly finished arms intended for practical use by the rancher, the hunter, the trapper, the prospector, and others who expected their guns to have hard use and regarded it as no tragedy if they were scratched a bit

Favorite guns among buffalo hunters on both sides of the international border were the powerful Sharps (top) and the Remington.

in the process. Yet one of the finest and most valuable Paterson-made Colt pistols known, beautifully cased with all accessories, was found in possession of a family whose ancestor had brought it to Manitoba from Ireland!

Fine and rare weapons (excluding those brought in from England or elsewhere in recent times by collectors) may be found more often in the coastal areas of British Columbia than in the other provinces of the Canadian West. Many of the families who settled in British Columbia were not poor homesteaders but people of some wealth, and their weapons reflected their financial status. One will occasionally find, for example, such expensive English-made arms as the Greener, Rigby, and Westley Richards. Some heirlooms were brought along, too. I have seen some handsomely wrought flintlocks—Cominazzo, Manton, Nock, Le Page and others—even a rare Forsyth pistol, prototype of the percussion ignition system.

From poor man's tool to the rarest of collector's items, a rich array of guns can still be found in Canada, "the England of the Pacific." □

The old journals of the Hudson's Bay Company reach back further than most other sources in tracing the history of the Canadian West, and the HBC quarterly magazine, *The Beaver*, often contains material of good historical value. Among American publications, H. H. Bancroft's Volumes 27, 28, 31 and 32 will be found useful in providing general information of the area. For very specific arms data, the archives of the Royal Canadian Mounted Police and the Canadian Forces Headquarters are rewarding. Also, the growing archives of the Glenbow Foundation at Calgary should not be overlooked in any serious study. J. P. Turner's *The North-West Mounted Police* (2 vols., 1950) is interesting and informative. In the past few years, an historical arms series in booklet form has been published by the Museum Restoration Service of Ottawa, and includes: *The Military Arms of Canada*, *The Snider-Enfield*, and *Small Arms of the Mounted Police*. More ambitious publications by this firm are *Military Exercises*, *A Treatise of Artillery*, and *The Canadian Gunsmiths*. Three very excellent publications that throw light on Canadian West history are *The Northwest Gun* by Chas. H. Hanson, Jr. (1955, Museum of the Fur Trade), Carl Russell's *Guns on the Early Frontier* (1957), and Volume 22 (December 1960) of the *Missouri Archeologist*. A relatively few definitive works have been devoted to the Canadian West, but it is an area in which historical research is now being actively pursued.

Medicine Show *continued*

imagination. Dr. Punja, the Hindu medicine man, promoted his Elixir of Life by first convincing the crowd that wonders of nature actually existed—wonders such as Siamese twins and a mummy that he called a petrified man. Dr. Punja then suggested that the audience had seen with its own eyes and now surely believed that such wonders of nature truly existed. He next observed that if he had told them of these marvels without first having displayed them, they would have laughed at him, but now they had seen and had to believe. He capped this with: "And now I show you this miraculous cure which is also a wonder of nature." Western townsmen were not well acquainted with petrified men, so after seeing Dr. Punja's version they were presumably prepared to accept the implied miracles of his Elixir of Life, as well.

Another method used to promote sales was to have boys distribute bottles of herb tonic throughout the audience while the medicine man talked about ailments and afflictions until each identified himself with some of the symptoms. The boys returned at the close of the lecture to collect silver dollars.

Doc Bevin, rated as the "smoothest spieler in the business," toured the prairie towns in the 1880's, selling Pine Pinon Cough Cure. His pitch, which was emulated by other medicine men, went as follows: "The aromatic and volatile oil contained in this simple, harmless remedy derives from the seed of the dwarf pine, gathered in our own Western America and transported over perilous mountain trails to shipping points from whence it is delivered to our mammoth laboratories in Kansas City and made into a soothing, healing compound for the benefit of all who are suffering from hacking coughs. Who takes the next bottle?"

Doc Ray Black, another successful medicine man, was a lone wolf. His only ballyhoo was a tripes (tripod) and keister (suitcase) set up on a vacant lot. On the small table in front of his medicine display, the pitchman placed a human skull, a big black Bible, and a short length of rope. Then he turned his back to the sidewalk and slowly rearranged these items, ignoring the gathering throng for half an hour or more. It was impossible for the natives to resist this. After a sizable audience had collected, he turned and began to speak. Old-time medicine men held him in awe, for he had the longest spiel

in the trade. He claimed he could hold a crowd for five hours, until their "backs are aching and they's certain they have lumbago or kidney trouble which my medicine will cure."

The more ingenious medicine men developed extensions and variations in their craft as the public tired of the old formulas. By the 1890's pitchmen had achieved great success in attracting crowds for the medicine spiel by providing free medical demonstrations, diagnosis, and treatment. Painless dentistry became a common prop of the late-nineteenth-century medicine shows.

The Big Sensation Medicine Company of Nebraska maintained a side show billed as the "King of Forceps," operated by a man-and-wife team. Both were huge; she held the patient and he pulled. This gargantuan team also had a fifteen-minute spot on the main show program in the big tent. A member of the Big Sensation troupe recalled that the band played loudly to drown the howls of pain while the King of Forceps worked.

Diamond Kit was a medicine man who worked the streets of many a busy western town. His gimmick was a liniment he promised would cure anything from rheumatism to sore throat. A native who watched him operate recalled that his "painless dentistry" ballyhoo set off his medicine sales. With tripes and keister, he set up for business by "carefully arranging a display of shining dentist's instruments on the table. Though he never touched anything but a pair of extraction forceps during his operation, these bright steel gewgaws caused a crowd to gather in sadistic anticipation of tortures to come." Oral care was primitive, and "in every crowd a certainty was someone with an aching or decayed tooth ready to volunteer for free extraction and save the fifty cents charged by the town dentist." Diamond Kit inspected the patient's mouth with a flourish, applied pain killer, "waved the forceps on high, grasped head with hand across windpipe," to thwart any painful groans, and yanked out the offending tooth. He stuffed the patient's mouth with cotton to staunch the blood, and, with his victim thus gagged, asked, "Did I hurt you?"

One Texas medicine show was well received by the natives because of the free clinic it provided. One patron reported he saw the good doctor "rub rheumatism out of a fellow's knee, give free treatment to three men with Bright's disease, cut a tumor off Bill Sykes' neck, pull three ingrowing toenails off the left foot of a total stranger, cut a cataract out of Jeff Spencer's right eye, and pull sixty-seven teeth without pain, besides selling $18 worth of medicine."

For years the catarrh treatment went over big in the medicine-show world. Promise of relief from this common and painful inflammation of the respiratory membranes attracted many a native to the big tent. A shill (a plant or confederate of the medicine man) was essential to this particular racket. After a lecture concerning the dreadful and far-reaching effects of catarrh, the pitchman held up a tin box containing his secret compound for curing the malady. He looked about the audience for a sufferer; spying a likely subject he inquired, "Do you have catarrh?" The man stepped to the stage and in nasal tones answered, "Suffered with it all my life." The doctor dabbed his secret compound in the subject's nostrils, handed him a clean, white handkerchief, and instructed him to blow hard. The familiar noise was heard "a hundred feet away." The pitchman showed the handkerchief to the attentive natives. Brisk sales followed. What the audience didn't know was that the medicine man had carefully packed his shill's nostrils with stiff custard or cornstarch pudding in his dressing room just before the show.

Many of the remedies vended by frontier medicine shows were imitations of established proprietary or patent medicines—Black Draught for the family, Wine of Cardui and Lydia Pinkham's Compound for female complaints, and Hostetter's Bitters (47 per cent alcohol) for general tonic. Only two medicine-show enterprises, Hamlin Wizard Oil Company and Kickapoo Medicine Company, maintained their own bottling plants. A few medicine shows filed formulas with established patent-medicine companies and had their products custom-packed and shipped with a local label. The Ton-Ko-Ko Medicine Show Company had its remedies bottled by a patent-medicine company in Kansas City. Ton-Ko-Ko Tonic cost less than two cents a bottle and sold on the road for one dollar, a margin of cost and profit that was quite common.

Just as the medicine shows followed a fairly set pattern of ballyhoo, entertainment, and medicine pitch, so also their remedies ran a familiar gamut: the usual cure repertoire included tonics, stomach bitters, liniments, salves, curative soap, nerve medicine, rubs, special concoctions for "secret diseases of men and women," and pain killers. Fantastic claims were made for the efficacy and curative qualities of these remedies. Nonpareil Rubbing Oil, for example—a "secret mixture" of exotic oils, including kawa oil, the only known cure for leprosy,

rattlesnake oil from snakes raised by the good doctor himself, eel extract from eels taken at night from the Crooked River during certain phases of the moon, and juju oil, brought from the Abyssinan wilds at great suffering and cost of human life—was touted as a cure for aches and pains in the chest, back, or limbs, and for earache, toothache, rheumatism, and lumbago. On analysis, its chief ingredients were found to be common eucalyptus oil and oil of mustard.

Medicine men learned that the natives believed that if a liniment did not smart or burn it was not reaching the source of trouble, and for it to be effective, the "skin had to get good and red." Thus, most liniments were compounded with a base of oil of capsicum (red pepper). Lightning Liniment was so powerful, with its oil of mustard base, that it brought tears to the eyes of the user. Mexican Mustang Liniment, Wolcott's Pain Paint, Resurrection Oil, and Cram's Fluid Lightning contained oil of mustard, oil of cajeput, oil of cloves, sassafras, ether, opium, and alcohol.

Stock in trade for the medicine man was the all-purpose tonic described as an "alterative," and pitched to "produce favorable change in the disordered functions of the body, and to tone, sustain, and regulate body functions." In other words, it was to relieve constipation. Common ingredients in such powerful laxatives were cinchona, licorice, opium, glycerin, and alcohol. Most medicine men added a dash of aloe to each tonic batch, since it was a truism in the trade that "the natives always demand vile-tasting medicine."

Alcohol was the most common ingredient in tonics, and its presence helped promote sales. Stomach bitters, the all-purpose lightning liniments (for external and internal use), and the "alterative" tonics had an alcohol content ranging from 10 to 50 per cent by volume. One reporter wrote, "It would take nearly nine bottles of beer to put as much alcohol into a thirsty man's stomach as the temperance advocate can get by drinking one bottle of Hostetter's Stomach Bitters."

The W.C.T.U., Anti-Saloon League, Prohibition Party, and Temperance League campaign in the late nineteenth century reduced the number of saloon habitués and even outlawed the sale of alcoholic beverages in certain sections by local option. As traditional sources of liquor dried up, the medicine show received increased patronage. One of the most lucrative stops for the medicine show was the legally dry Indian Territory, where tribesmen were reported to have carried away bottles of tonic by the armload.

King of the road on the medicine-show circuit was the Kickapoo Indian Medicine Company, a partnership organized in 1881 by Texas Charlie Bigelow, peerless promoter from the Lone Star State, and Colonel John Healy, of liver pad fame, whose favorite quotation was, "What fools these mortals be." Dr. N. T. Oliver, alias Nevada Ned, ace Kickapoo pitchman, said this pair gave "one of the earliest Wild West shows as a come-on for Kickapoo Indian Sagwa." Exploiting eastern fascination for western lore, Healy and Bigelow organized thirty itinerant troupes, each unit consisting of from ten to thirty Indians (men, women, and children), and a frontier scout named Yellowstone Joe, Kit Carson, or Nevada Ned from the Golden West, resplendent in buckskins, long flowing hair, and a booming, persuasive voice. The "scout" served as interpreter, guide, and manager for the unit, and doubled as the medicine man for the Kickapoo Sagwa pitch. The troupe's equipment included a huge circus tent plus smaller tents for displaying Indian crafts and lore.

The Kickapoo Medicine Company contracted with federal Indian agents for tribal performers, pledging protection and good care, and thirty dollars a month and keep for each Indian. Most of the Kickapoo Medicine Company Indians were from isolated bands of New York Iroquois stock, Canadian Indians, and a few, notably Pawnees, were actually from Indian Territory. But at no time did a genuine Kickapoo ever grace a Healy–Bigelow troupe. Kickapoos were fierce, arrogant, Anglo-hating tribesmen fresh from the Mackenzie raid in northern Mexico, and at this time brooded as prisoners of war on their tiny Deep Fork Reservation in Indian Territory. When asked why this particular tribe had been selected, Nevada Ned explained that "the word 'Kickapoo' tickled Healy's ear."

Healy and Bigelow made a splendid team. The Colonel handled the Indians and general show business, including the itinerary and local arrangements, while the Texan managed the medicine formulas and production, and the shipping and advertising. Bigelow's talent as an ad writer explained much of the success of the Kickapoo Medicine Show. Each town along a circuit was plastered with colorful posters and handbills inviting the public to see "Free Indian Exhibition," "Kickapoo Indian Ball Players," and "Kickapoo Indians Hunting Buffalo for Tallow to Make Kickapoo Indian Salve." Local newspapers looked forward to the annual Kicka-

poo Medicine Show account, which called for large ads. And in an age when most household reading material consisted of the Bible, mail-order catalogs, and almanacs, the colorful Healy–Bigelow publication, *Life and Scenes among the Kickapoo Indians, and the Discovery of the Wondrous Cures Affected by Them*, was well received. It was a skillful blending of largely fanciful western lore, numerous exciting drawings, and "medical" advertising. In a volume of 175 pages, interspersed with descriptions of the healing qualities of Kickapoo Indian Sagwa, Kickapoo Indian Oil, Kickapoo Indian Salve (made of buffalo tallow), Kickapoo Indian Worm Killer, and Kickapoo Indian Cough Cure, were modest biographies of Texas Charlie Bigelow and Colonel John Healy and sketches of famous frontiersmen, all keyed to the reader's hunger for adventure.

Imaginative pitchmen sought new ballyhoo methods to distract natives from the appealing Kickapoo extravaganzas. One curious competitor was the Quaker doctor, who exploited the image of integrity enjoyed by that sect. It was reported that "this variation caught the public fancy from the start." Pitchmen in the drab gray clothing, wide-brimmed, low-crowned hats, and somber cloaks so easily associated with members of the Society of Friends had considerable crowd appeal. This sacrilegious appropriation was best pulled off by Brother Benjamin, Doctors Beason and Anderson, Brother Jonathan, and Hal the Healer, the last a success on the West Coast. These pitchmen even borrowed the speech peculiarities of the Quakers by injecting "Brother," "Thee," and "Thou" into their spiel.

Related to the Quaker-doctor gimmick was the Shaker doctor. William P. Burt, a veteran performer with the Hamlin Wizard Oil Company, recalled that in 1893 Shaker Remedies troupes appeared in many towns of the Plains and the Rockies. When the Shaker medicine-show units first appeared in the West, the troupe entertainers were psalm singers dressed in Shaker bonnets and one-piece gowns of Shaker brown. According to Burt, the psalm-singing failed to please the natives, so livelier artists were engaged. But the Shaker doctors and lecturers (pitchmen) continued to wear buttoned-to-the-neck frock coats, straight-cut trousers, and high, bell-shaped hats, and assumed "a starchy dignity when on duty."

The penchant of the public for the exotic in entertainment and medicine made the Chinese herb remedy especially profitable. One of those who used this angle most successfully was James Monroe Ferdon, alias Dr.

Jim Ferdon, alias the Great Paul, alias the Great Pizarro. He used a Japanese, clad in Mandarin costume and speaking in Chinese dialect, to deliver a lecture that revealed ancient Chinese secrets of virility, health, and longevity. Ferdon then purported to translate the secrets and to relate them to his Chinese Herb Tonic. Ferdon's mind was as facile as his names were numerous. On one occasion a Chinese laundryman in the audience arose and denounced the Japanese as an imposter. Ferdon turned on the laundryman and accused him of being a member of a rival tong, proceeded to lecture on the terrors of tong warfare, and turned a dangerous situation into a sellout of all the Chinese Herb Tonic in stock.

After 1900 the frontier medicine show went into decline. Three developments brought this about. First, the natives were becoming more sophisticated, and less susceptible to the blarney of the medicine-show pitchman. Second, new types of entertainment began to compete with the medicine-show offerings, including magic-lantern shows and primitive moving pictures. Some medicine-show managers added both the magic lantern and the moving pictures to their variety entertainment in a losing attempt to draw the crowds of old. Other medicine men turned to publicity stunts, including prize drawings at each show, and contests awarding a set of china to the most beautiful woman in the audience and a watch to the most homely man.

The third and most devastating factor in the medicine show's decline as an entertainment and merchandising agency was state and federal regulation. The high alcohol content of most medicine-show tonics brought down upon the pitchmen the wrath of the Anti-Saloon League, the W.C.T.U., and the Temperance League. One state board of health director described their elixirs as "cheap cocktails." Muckraking journalists took the medicine shows and proprietary (patent) medicine people to task by lurid exposés of their products. State, county, and municipal laws regulated and licensed the medicine shows, requiring a fee of from $10 to $100 a month to operate.

State and federal law also restricted what the pitchmen could claim for their remedies. Because the Federal Trade Commission forbade those specific and ambitious promises of cure once made by the medicine-show pitchmen, the spiels were forced to relinquish "my product cures," and to settle for "my product relieves." "Now I don't practice medicine, diagnose, or write prescriptions," one carefully demurred. "And I don't say that I can cure you. But I know I can help you. If you're gassy, dizzy, can't sleep, have a coated tongue, foul breath, pain in the head or feet, if you get up nights, if you haven't got any appetite, if your glands aren't working, then be fair to yourself. Don't invite sickness, death, destruction, and the grave. Get relief here tonight."

Harassment through damage suits hurt the medicine shows, too. The "King of Forceps," chief attraction of the Big Sensation Medicine Show Company, was tied up in Iowa courts for several months for breaking a man's jaw while demonstrating his technique of painless dentistry.

Each succeeding year of the twentieth century saw a decline in the number of medicine shows. One writer noted that in 1942 there were "less than a dozen sizable medicine shows on the road." As late as 1951 an itinerant troupe was reportedly still active in the western Missouri towns, but the report took care to point out that "modern audiences are more critical of both the performance and the remedy."

The medicine man remains today very much a part of the American scene, but in a different guise—he has substituted radio and television for the big tent. One pioneer of radio doctoring was medicine man Dr. John R. Brinkley, whose powerful radio stations in Kansas and northern Mexico beamed promises of restored vitality through the goat-gland operation, and better health from his secret tonics. String bands and folk music held the listening audience for the pitch. Brinkley formed the National Dr. Brinkley Pharmaceutical Association, and organized hundreds of druggists across the country into an outlet chain. Listeners sent in descrip-

tions of their ailments to the Medicine Question Box, and Brinkley read them over the air, diagnosed the trouble, and prescribed his remedies. For a particular ailment the remedy might have been Brinkley's Women's Tonic No. 50, No. 57, or No. 61, numbers that were keyed to bottled Brinkley nostrums stocked by local druggists. From this enterprise he took in a reported $2,000 a day, nearly a cool million a year. Analysis of the dozens of separate Brinkley remedies prescribed for virtually all ailments to which man is heir showed the remedies to consist principally of opium and castor oil.

Though his spiel has become somewhat more restrained, the modern television and radio pitchman still hawks pills and tonics to wake up sluggish kidneys, relieve constipation, combat excess acidity, control headaches and colds, and restore lost vitality. And although state and federal regulations forbid specific promises of cure, the modern pitchmen surpass the guile of Texas Charlie, Yellowstone Kit, Nevada Ned, and other merchandising pioneers by sly formula, implication, and innuendo. And they use charts showing the same vital parts, innards, and body functions, charts now animated but cut from the same old cloth of purest hokum. □

The Frontier Medicine Show is an elusive subject. One source of information, which deals with the medicine show only incidentally, is the history of the patent or proprietary medicine industry. In this class are James H. Young, *The Toadstool Millionaires* (Princeton, 1961); James Cook, *Remedies and Rackets: the Truth about Patent Medicines Today* (New York, 1958); Steward Holbrook, *The Golden Age of Quackery* (New York, 1959); and Gerald Carson, *One for the Man, Two for the Horse* (New York, 1964), which includes many excellent illustrations.

The most useful sources were the recollections and memoirs of medicine-show pitchmen themselves. Malcolm Webber's *Medicine Show* (Caldwell, Idaho, 1941), and Violet McNeal's *Four White Horses and a Brass Band* (New York, 1947) are book-length works in this class. Equally helpful was an article by William P. Burt, "Back Stage with a Medicine Show Fifty Years Ago," *Colorado Magazine* (July, 1942), and a series of two by N. T. Oliver, "Alagazam—the Story of Pitchmen, High and Low," *Saturday Evening Post* (October 19, 1929) and "Medicine Show," *Saturday Evening Post* (September 14, 1929). Other memoirs came from those who witnessed medicine shows. F. J. Clifford, "The Medicine Show," *Frontier Times* (November, 1930), and Joe Sappington, "The Passing of the Medicine Show," *Frontier Times* (February, 1930) are two good examples.

The medicine showman was a daring type who invited chacterization. Articles that probe his ego include David Edstrom, "Medicine Men of the '80's," *Reader's Digest* (June, 1938); Thomas J. Le Blanc, "The Medicine Show," *American Mercury* (June, 1925); George J. Nathan, "The Medicine Man," *Harper's Weekly* (September, 1911); and Jim Tully, "The Giver of Life," *American Mercury* (June, 1928).

Hayden in the Badlands *continued*

wood and water, the vegetation parched by drought. No game was to be seen but a few antelopes, which were so wild that it was impossible to kill them. About three o'clock we reached the head of Medicine creek, a tributary of the Missouri. Our distance was about fifteen miles. We found here excellent grass for our animals, fine clear water, and an abundance of wood. This stream is fed by springs, contains an abundance of fish and well skirted with timber, and much vegetation grows along its banks. Many species of flowers were in bloom, rendering the contrast quite pleasing.

The following day we continued the same course until we came to the White river valley, and the upland prairie presented the same parched appearance. Approaching White river, the country is somewhat rugged, and the hills that bordered the valley had the usual arid sterile aspect, but we soon passed over into the beautiful valley which was at this time clothed with fresh green grass, from ten to fifteen inches in height and the timber skirting the river was in full foliage. Myriads of flowers enamelled the prairies and honey bees were industriously at work by thousands among the Leguminous blossoms. I was not aware that this little inhabitant of civilization had wandered so far into the western wilds, until he appeared here, and I would infer from the number I saw that they must inhabit some of the numerous dry trees along the river. After striking the river we passed up along the broad level to the forks, and camped in a most delightful place. We were in want of nothing, either for ourselves or animals, and of course all in high spirits. The soil of these bottoms is very fertile, composed of the calcareous and aluminous marls of the Tertiary basin through which the upper portion of this river flows, and the clays of the Cretaceous system which forms the hills, and is the basic formation throughout the valley.

The following day, May 11, we passed up the valley four or five miles above the forks, for the purpose of fording the river. The left fork is the main stream, and, at this time was much swollen and the current quite rapid. The bottom is so full of quicksands and other impediments that we found it very difficult to discover a crossing place. Finally, after a most diligent search of several hours wading about in the stream, we ventured to make the attempt. We first unloaded everything in our carts and carried it to the opposite side, a distance of one

hundred and fifty yards, and then letting our carts down the steep bank with great care, we passed safely over on the other side with no other trouble than the miring of our horses in one or two instances. After landing safely on the other side, we ascended the high hills which border the river, and camped in a beautiful ravine, from which flowed a fine spring, surrounded with an abundance of wood. . . . The water of White river is very peculiar, containing a large quantity of calcareous and aluminous matter held in suspension, so that it has much the appearance of milk. When allowed to stand for a short time, or whenever it is found in pools, a thick scum may be seen upon the surface very much of the appearance and consistency of rich cream; removing this, and the thinner portion is of a much lighter color, like milk. It is very astringent to the taste, and its medical effect on the traveller is quite the reverse of the water previously used. This river has been navigated by traders with small Mackinac and bull boats for over one hundred miles from its mouth. We found plenty of antelopes near our camping place. Our Indian killed two fine ones, which formed a most acceptable addition to our larder.

On the following day we passed over a fine rolling upland prairie on the northern slope of the dividing ridge between White river and Running Water. After descending two steep hills which border the river bottoms, the prairie slopes gently towards the south for a distance of fifteen or twenty miles to a high ridge which is visible in the distance and covered with pines. Our course was about due west. On our right the lofty denuded ridges of the "Bad Lands" appear, while scattered all over the valley are patches of white earth, monuments of the Tertiary basin left after denudation. The whole valley gives unmistakable evidence of having been levelled to its present condition by the action of denudation. The day was quite fine. We camped at night on Bad Land creek, and before reaching it we passed through considerable bad ground, which rendered our travelling quite hazardous. They seemed quite appropriately named. There are many things of the deepest interest in this valley, and as yet it is almost *terra incognita*. All the streams on the right side of White river flow from perpetual springs in the distant ridge, and even in the dryest season they are full of cool crystal water, their sides fringed with many varieties of water plants, and their valleys clothed with abundant grass and flowers. Contrasted with most of the country on the upper Missouri, the White river valley is a paradise, and the Indians consider it one of the choice spots of earth. Indeed, when supplied with an abundance of meat, they always resort here and spend their time in amusements or in cultivating their numerous gardens which are scattered throughout the valley. The Brulés and Yanktons raise a considerable amount of corn and other vegetables, and with very little attention they get a tolerable crop. The greatest deficiency that will be felt here will be the scarcity of wood for fuel, and, like other portions of the upper Missouri country, no coal need be sought after. . . .

May 14.—We passed several fine streams, all having a uniform appearance, and the whole region approaching more closely the fertile portions of Kansas. We camped at night on a fine stream called "The creek where the Indians plant corn." Our Indian guide spent a day here planting a small patch of corn and potatoes. On our left, as far as we could see, was fine rolling prairie clothed with vegetation, while on our right, the tall naked columns and domes of the "Bad Lands" loom up, assuming most unique and fantastic shapes. Our Indian guide led us along an old buffalo track, a very rugged road, a fact of which we were convinced by having our carts upset and the contents distributed over the ground. The Indians say, however, that in travelling over a country with which they are unacquainted they always follow a buffalo trail, for this animal always selects the most practicable route for his road. At the mouth of this creek is the most beautiful exhibition of the Bad Lands I have ever seen.

On the 18th we camped near a fine spring, which was but a little distance from it, and we resolved to stop a day or two and explore it. Our animals needed rest, and here was an abundance of good grass and water. After partaking of a delicious dinner of antelope meat, I started out, accompanied by my voyageur, and ascending an elevation which was above the bad ground, looked down upon one of the grandest views I ever beheld. The denuded area was nearly square in form, and the immense flat concretions that projected out from the sides of the perpendicular walls in regular seams, and at about equal distances above each other, resembled some vast theatre; indeed, it reminded me of what I had imagined of the amphitheatre of Rome, only nature works upon a far grander scale than man. We climbed with great difficulty down the steep sides, following the main channel of the little stream, and after much winding through this labyrinthian sepulchre, we came to an open plateau covered with fine grass, and in the centre a beautiful

grove of cedars, and through the whole a stream of milky water wound its way to White river, about five miles distant. All around us were bare, naked, whitened walls, with now and then a conical pyramid standing alone. We felt very much as though we were in a sepulchre, and, indeed, we were in a cemetery of a pre-Adamite age, for all around us at the base of these walls and pyramids were heads and tails, and fragments of the same, of species which are not known to exist at the present day. We spent that day and the following exploring the cemetery, which the denuding power of water had laid open for our inspection, and many fine specimens rewarded our labors.

On the morning of the 21st, we started for White river, on which we camped. We were about to leave behind us good grass and water, for in the direction we were going we could expect nothing but a desert and salt water. The bottoms were, as usual, quite good, but the hills that bordered it were terribly denuded, showing us that we were still in "Bad Lands." The following morning we crossed the river with some difficulty, on account of the sinking of the horses into the quicksands, and then wound our way among the sand hills in a direction nearly parallel with the river. These sand hills sustain very little vegetation, have often very nearly perpendicular sides without stratification, and are probably formed by the mud. On our right, the main body of the Bad Lands appeared with its numerous labyrinthic passages, illustrating most finely the denuding power of the water. Many rare plants were observed here, but few animals. . . . Antelopes were more abundant than other kinds of game, and we were able to supply ourselves with meat. Occasionally a bighorn was added, which made a very agreeable variety. The meat of the female has much the flavor of mutton. On the following night, we camped on a tributary of White river; wood was very scarce, and the water of the poorest quality. All the tributaries of the northern side of White river are of the same character. The next day we were desirous of getting to Bear creek, the usual camping place of visitors to the Bad Lands. Our road was exceedingly rugged, winding among the terrible canyons and gullies. We were not able to get through without again upsetting our carts, and were obliged to pack our baggage a considerable distance. At last we struck the main road between Fort Pierre and Fort Laramie, and then our troubles were at an end. We had followed an old buffalo trail seventy-five miles through a country never before travelled by carts. We had been seventeen days reaching Bear creek, whereas, if we had followed the usual route, it would have required but six days. But I had the pleasure of exploring a large area of most interesting country, never traversed before but by Indians. . . .

And some reflections, subsequent to the expedition of 1866:

It has always gone by the name of "Bad Lands;" by the Canadian French as "*Mauvaises Terres*;" in the

A scene in the Badlands, 1866: the White River formation in Nebraska.

Dakota tongue, "*Ma-koo-si-tcha.*" These words signify a very difficult country to travel through, not only from the ruggedness of the surface, but also from the absence of any good water and the small supply of wood and game. In the summer the sun pours its rays on the bare white walls, which are reflected on the weary traveler with double intensity, not only oppressing him with the heat, but so dazzling his eyes that he is not unfrequently affected with temporary blindness. I have spent many days exploring this region when the thermometer was 112° in the shade and there was no water suitable for drinking purposes within fifteen miles. But it is only to the geologist that this place can have any permanent attractions. He can wind his way through the wonderful canyons among some of the grandest ruins in the world. Indeed, it resembles a gigantic city fallen to decay. Domes, towers, minarets and spires may be seen on every side, which assume a great variety of shapes when viewed in the distance. Not unfrequently the rising or the setting sun will light up these grand old ruins with a wild, strange beauty, reminding one of a city illuminated in the night when seen from some high point. . . . It is at the foot of these apparent architectural ruins that the curious fossil treasures are found. In the oldest beds we find the teeth and jaws of a Hyopotamus, a river horse much like the Hippopotamus, which must have sported in his pride in the marshes that bordered this lake. So, too, the Titanotherium, a gigantic pachyderm, was associated with a species of hornless Rhinoceros. These huge rhinoceroid animals appear at first to have monopolized this entire region, and the plastic, sticky clay of the lowest bed of this basin, in which the remains were found, seems to have formed a suitable bottom of the lake in which these thick-skinned monsters could wallow at pleasure. As we pass higher up in the sediments, we find the remains of a great variety of land animals mingled with those that were aquatic in their nature. In a bed of flesh-colored marl which is visible for a great distance, like a broad band in the sides of these washed hills, thousands of turtles were imbedded, and are preserved to the present time with surprising perfection, the hard portions of them being as complete as when they were swimming about in these Tertiary waters hundreds of thousands of years ago. They vary in size from an inch or two in length across the back to three or four feet. But one species has ever been discovered in this basin, and so far as we know these reptiles made up in numbers what they lacked in variety. Associated with the remains of the turtles, are those of a number of ruminants, all belonging to extinct genera, and possessing peculiar characters which ally them to the deer and the hog. Indeed, Dr. Leidy calls them ruminating hogs. Like the domestic species, they were provided with cutting teeth and canines, but the grinding teeth are constructed after the same pattern as those of all living ruminants. The feet of these animals were also provided with four toes as in the hog, and none of them possessed horns or antlers. They appear to have existed in immense numbers, and to have lived in great herds like the bison of the West. Remains of more than seven hundred individuals of one species have been already studied and described by Dr. Leidy. Their enemies were numerous wolves, hyaenodons and saber-tooth tigers. . . .

We may attempt to form some idea of the physical geography of this region at the time when these animals wandered over the country, and to speculate as to the manner in which their remains have been so beautifully preserved for our examination. We may suppose that here was a large fresh-water lake during the middle Tertiary period; that it began near the southeastern side of the Black Hills, not large at first nor deep, but as a marsh or mud-wallow for the gigantic pachyderms that lived at the time; that as time passed on it became deeper and expanded its limits until it covered the vast area which its sediments indicate. We cannot attempt to point out in detail all the changes through which we may suppose, from the facts given us, this lake has passed, during the thousands of years that elapsed from its beginning to its extinction, time long enough for two distinct faunae to have commenced their existence and passed away in succession, not a single species passing from one into the other. Even that small fraction of geological time seems infinite to a finite mind. We believe that the great range of mountains that now lies to the west of this basin was not as lofty as now; that doubtless the treeless plains were covered with forests or grassy meadows upon which the vast herds of gregarious ruminants cropped their food. Into this great lake on every side poured many little streams from broad valleys, fine ranging ground for the numerous varieties of creatures that existed at that time. Large numbers of fierce carnivorous beasts mingled with the multitudes of gregarious ruminants, constantly devouring them as food. As many of the bones, either through death by violence or natural causes, were left in the valleys, they would be swept down by the first high waters into the lake and enveloped in the sediments

at the bottom. As the gregarious ruminants came down to the little streams or by the shores of the lake to quench their thirst, they would be pounced upon by the flesh-loving Hyaenodon, Drepanodon, or Dinichthys. It was probably near this place also that these animals would meet in fierce conflicts, the evidences of which remain to the present time in the cavities which the skulls reveal; one of these, of a huge cat, shows on either side the holes through the bony covering which had partially healed before the animal perished, and the cavities seem to correspond in form and position with the teeth of the largest Hyaenodon.

The remains of those animals which, from their very nature, could not have existed in great numbers, are not abundant in the fossil state, while those of the ruminants occur in the greatest abundance and are widely diffused in the sediments not only geographically, but vertically. The chances for the preservation of the remains of a species seem to depend upon the number of individuals that existed. The remains of ruminants already obtained comprise at least nine-tenths of the entire collection, while of one species, portions of at least seven hundred individuals have been discovered. We might take examples from the animals that exist in this region at the present time that would illustrate the point. The wolves watch the deer, antelope, and other feebler animals as they go down to the little streams for water, and all over the wide bottoms their skeletons are distributed in a more or less perfect condition. Whenever a bison becomes too feeble by disease or age to offer a successful resistance, the wolves soon dispatch him, and his bones are left bleaching on the ground. In most cases these animals when pursued betake themselves to the water, where they are not unfrequently drowned, or dispatched on a sand-bar or island. Annually, thousands of buffaloes, in attempting to cross the Missouri river and some of its large tributaries on the ice as it is breaking up in the spring, are drowned. For many days their bodies are seen floating down the river by Fort Union or Fort Clark, and lodging on some of the islands or sand-bars fill the air with the stench of their decay. In the spring of 1857 thousands of their bodies floated down the Kansas river past Fort Riley and were carried into the Missouri river. These animals are often mired in the marshes or the muddy shores of lakes or streams in great numbers. We know what vast numbers of the mastodon have been preserved in the Big Bone Licks of Kentucky, and of the Irish elk in the bogs of Ireland. We might instance hundreds of examples to show how easily these animals, roaming and feeding along the numerous streams flowing into some great lake, could be transported in part or entire into the lake, and sinking to the bottom would be enveloped in the muddy sediments.

The skull of an Oreodon Culbertsoni *— a ruminating hog — the most common fossil Hayden found in the Badlands.*

There is another interesting feature in regard to these remarkable fossils, and that is the beauty and perfection of their preservation; the bones are so clean and white and the teeth so perfect that, when exposed upon the surface, they present the appearance of having bleached only for a season. They could not have been transported from a great distance, neither could the waters have been swift and turbulent, for the bones seldom show any signs of having been water worn, and the nice sharp points and angles are as perfect as in life. . . .

Before leaving this subject, there is another interesting topic of inquiry: why such a beautiful series of vertebrate remains should be so perfectly preserved in this lake deposit, and yet the remains of other forms of animal and vegetable life be almost entirely absent. The sediments seem to be peculiarly adapted to the preservation of a full series of documents bearing upon the history of those times. And yet in the older beds, where the mammalian remains are most abundant, only one small species of snail, a land shell, is found preserved. Where is the evidence of the swarms of fishes that must have filled the streams and lakes of that time? Of the vegetable life, if any existed, only now and then a fragment of silicified wood is found, and that, too, in the latest de-

Badlands between the Sage Creek fossil beds and White River.

posits. I am prepared to believe that the broad plains were, even at the time of the existence of these animals, as treeless as at present, yet I am quite unprepared to explain the almost entire absence of vegetable remains. We know that fresh-water shells, much like those existing in the little clear streams of the present time, as well as some remains of fishes, are found in some limestones on the summits of hills near Pinos Spring on the northern rim of the lake.

Another interesting question occurs to me in this connection, how was it that a complete fauna, comprising more than forty species of animals, was introduced upon the earth, lived through its legitimate period, entirely perished or was swept out of existence, and an entirely new fauna, comprising about the same number and variety, was again introduced in the same region? It, too, lived out its period of existence, which must have been hundreds of thousands of years, and yet every one of this group of animals disappeared from the globe, leaving nothing behind to tell the tale but fragments of their bony skeletons. . . .

Eventually, in 1879, the Hayden Survey was brought to a close, along with the other government surveys that had joined it in the field: the Geographical and Geological Survey of the Rocky Mountain Region, under John Wesley Powell, and Lieutenant George M. Wheeler's Geographical Surveys West of the One Hundredth Meridian. The Geological Exploration of the Fortieth Parallel, headed by Clarence King, had been terminated the previous year.

On the basis of their work, the present United States Geological Survey took form. Drawing on their accomplishments, the West emerged from the frontier wilderness into the modern scientific age. The mystery these pioneers had encountered, they left as knowledge—but not final knowledge. "Geology," Hayden said, "is a progressive science and even our best efforts are but approxi-

mations to the truth rather than the truth itself."□

The Hayden excerpts were extracted from his published writings brought out during and shortly after his explorations in the Badlands.

The first was drawn from his field journal of the 1855 expedition to the Badlands, published as part of Lieutenant Gouverneur K. Warren's *Report of the "Sioux Expedition" of Explorations in the Dakota Country in the Year 1855* Senate Executive Document No. 76. 54th Congress, 1st session. Washington, 1856. Appendix E, *Geological Notes on Nebraska*, by Dr. F. V. Hayden.

The second excerpt embodies some of Hayden's reflections on the paleontological aspects of the Badlands. They were written sometime following his last trip to the area in 1866. They originally appeared in the book, *Sun Pictures of Rocky Mountain Scenery with a Description of the Geographical and Geological Features, and Some Accounts of the Resources of the Great West*, by F. V. Hayden, M.D., U.S. Geologist. Julius Bien, New York, 1870. These reflections were made part of the official record in Hayden's *Preliminary Report of the United States Geological Survey of Wyoming and Portions of Contiguous Territories* (Being a Second Annual Report of Progress). United States Geological and Geographical Survey of the Territories, Fourth Annual Report (Hayden). Washington, 1871.

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Hard-nosed Conservationists *continued*

Maine coast, the club says: "Many thousands of Americans will discover in these photographs the beauty that is the reason for [the area's] fame; many thousands more will rediscover its charm. Hopefully all will re-experience the irreplaceable values to be gained from knowledge of such places, and out of this experience draw inspiration for the ways to preserve them."

Brower credits the books with stimulating the club's tremendous increase in membership. (In 1964, there were 26,500 members; in 1965, 34,500; and by the end of last year, more than 46,000.) He says the club has not really become more outspoken than it used to be — it was just as devoutly dedicated to the preservation of the wilderness in 1915, when John Muir was fighting San Francisco's Hetch Hetchy project on the Tuolumne River.

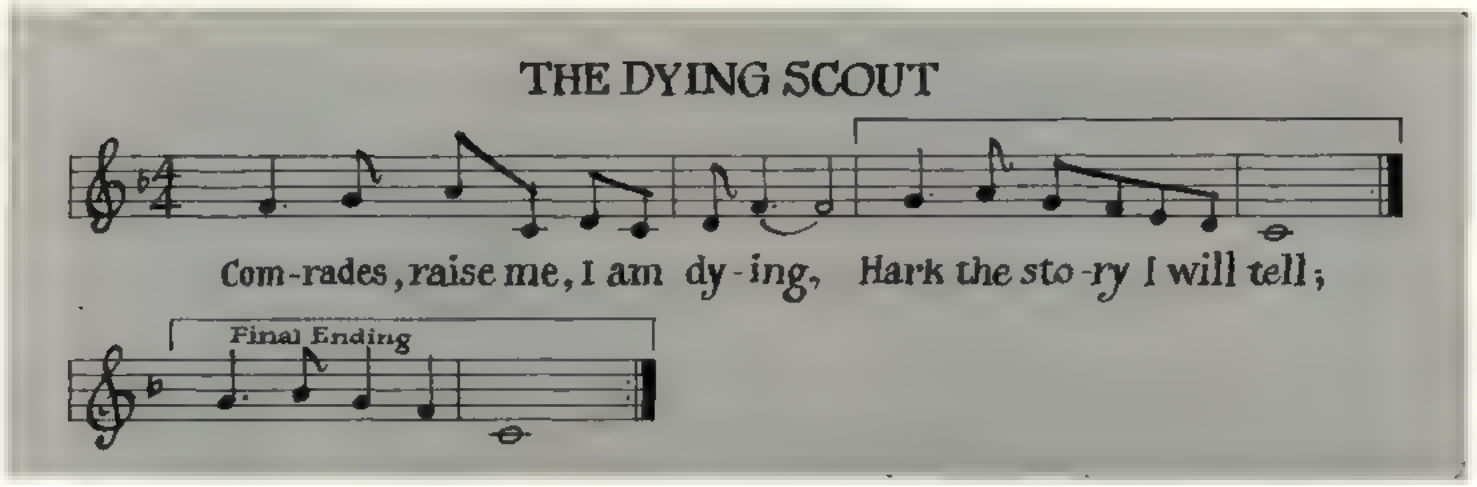
"There has always been a tiff going on somewhere — Sequoia, Kings Canyon, Olympic. The principles of the club have always been the same. The difference is the books, and that's just a way of finding a route to the audience, to say the same old thing." The conservation audience, Brower has said many times, is mostly city people who long for wilderness as part of their "geography of hope."

"They're the people who think the city is a fine place to live as long as you can get out of it. People from rural areas often have the attitude that the West needs more development — more dams, more lumber mills, more highways, not more wilderness. Of course, that's changing because the city and the country are getting more alike."

About a third of the Sierra Club's members live in the San Francisco Bay Area. Another third live elsewhere west of the Rockies, particularly in Los Angeles and the Pacific Northwest. The remainder are scattered throughout the United States, in New York, New England, Chicago, and Washington, D.C. About 30 staff employees work in the main office on the tenth floor of the Mills Tower in downtown San Francisco. The setting is cruelly urban: carpets, filing cases, telephones, and only a few Eliot Porter prints for the geography of hope.

It was here amid light-well and elevator shaft, far from the music of white waters and the scent of redwood boughs, that Brower made a sudden decision in December, 1965, to go after a far larger audience than the books had reached. The crisis at hand was the fate of the proposed Redwood National Park on California's northern coast; and the catalytic event was a meeting in Washington, D.C., called by Secretary of the Interior Stewart Udall, to discuss the location of the park. The Sierra Club, which has insisted on a site along Redwood Creek in Humboldt County, was not invited.

On a Wednesday afternoon, Brower decided to spend $15,000 on advertising to dramatize the difference between the club's proposal and the compromise locations



Comrades, raise me, I am dying,
Hark the story I will tell;
Break it gently to my mother,
You were near me when I fell.
Tell her how I fought with Custer,
How I rode to tell the news;
Now I'm dying, comrades, dying—
Tell me, did we whip the Sioux?

Chorus:
Comrades, raise me, I am dying,
Catch the story I will tell;
Break it gently to my mother,
You were near me when I fell.

Tell my mother that, when dying,
Every scene came back anew—
All those happy days of childhood,
When life's cares I little knew.
Tell her that I still remember
How she wept for very joy
When she clasped her arms around me,
Welcomed home her soldier boy.

Comrades, tell my mother truly
How we fought to hold the hill;
Tell her how we gained the vict'ry—
That I die a soldier still.
Hark! I hear a voice up yonder,
All is sunshine, bright and fair;
Tell my mother I am dying—
She will meet her boy up there.

The poet-scout, Jack Crawford, informs us that "The Dying Scout," which he published (and presumably wrote), was sung for twenty-one nights at the Emerson Opera House in San Francisco. The singer was Beaumont Read and the tune, according to Crawford, of Read's making. "The Dying Scout" is actually a servile parody of "The Dying Californian," a favorite of the mid-nineteenth century. We have not encountered Read's melody, but we suspect that it was the tune for "The Dying Californian" which is given here. Crawford dedicated the song to the memory of Muggins Taylor, Custer's courier.

Ballads of the Little Big Horn *continued*

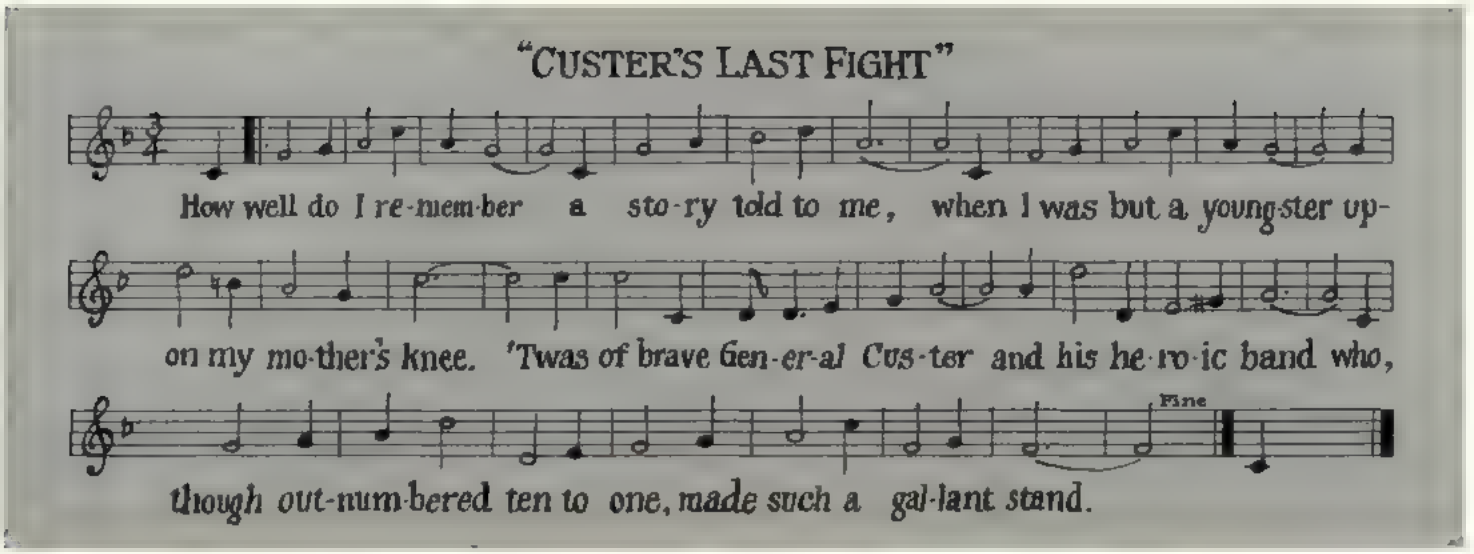
Hard-nosed Conservationists *continued*

favored by the lumbering industry. Two days later, full-page advertisements appeared in five major daily newspapers with combined circulation of more than 2½ million: the *San Francisco Chronicle, Los Angeles Times, New York Times, Washington Post,* and (a day later) the *Sacramento Bee.*

Headed "An Open Letter to President Johnson on the last chance *really* to save the redwoods," the ads warned, "Within two years, if industry continues to cut at its present rate in the area singled out on Redwood Creek by the National Park Service for the national park, there will be nothing worthy of the name left to save." Juxtaposed with a picture of a redwood forest, pierced by slanting shafts of sunlight, was a photograph of a cut-over area, all wreckage and ghostly stumps.

At the bottom of the page was a plea to readers to write to the President, the Governor of California, and organizations working for a "real" national park. A coupon in the corner could be clipped out to send along with a tax-deductible contribution to the club.

Brower wrote most of the copy, and its effectiveness was proved by a flood of contributions and membership applications that paid the cost of the publicity. For the next foray Brower decided to bring in a professional advertising agency. This time the area in jeopardy was a perfect battlefield for the conservationists: the Grand


"CUSTER'S LAST FIGHT"
How well do I re-mem-ber a sto-ry told to me, when I was but a young-ster up-
on my mo-ther's knee. 'Twas of brave Gen-er-al Cus-ter and his he-ro-ic band who,
Fine
though out-num-bered ten to one, made such a gal-lant stand.

How well do I remember a story told to me
When I was but a youngster upon my mother's knee.
'Twas of brave General Custer and his heroic band
Who, though outnumbered ten to one,
made such a gallant stand.

If out in South Dakota you ever chance to stray
You will see a famous river still rippling on its way.
It's called the Little Big Horn, 'tis there that Custer fell,
It was the silent witness of the story I will tell.

'Twas on this spot the redskins had come for miles around
To stop the mighty paleface, once more to stand their ground,
They came in endless numbers led by the crafty Sioux,
They had Winchester rifles and knew how to use them too.

It was the redman's hour, Chief Bull and Crazy Horse
While waitin' there in ambush for Custer's little force;
They soon had him surrounded, redskins on every side
Brave Custer's men fought their last fight,
Their graves mark where they died.

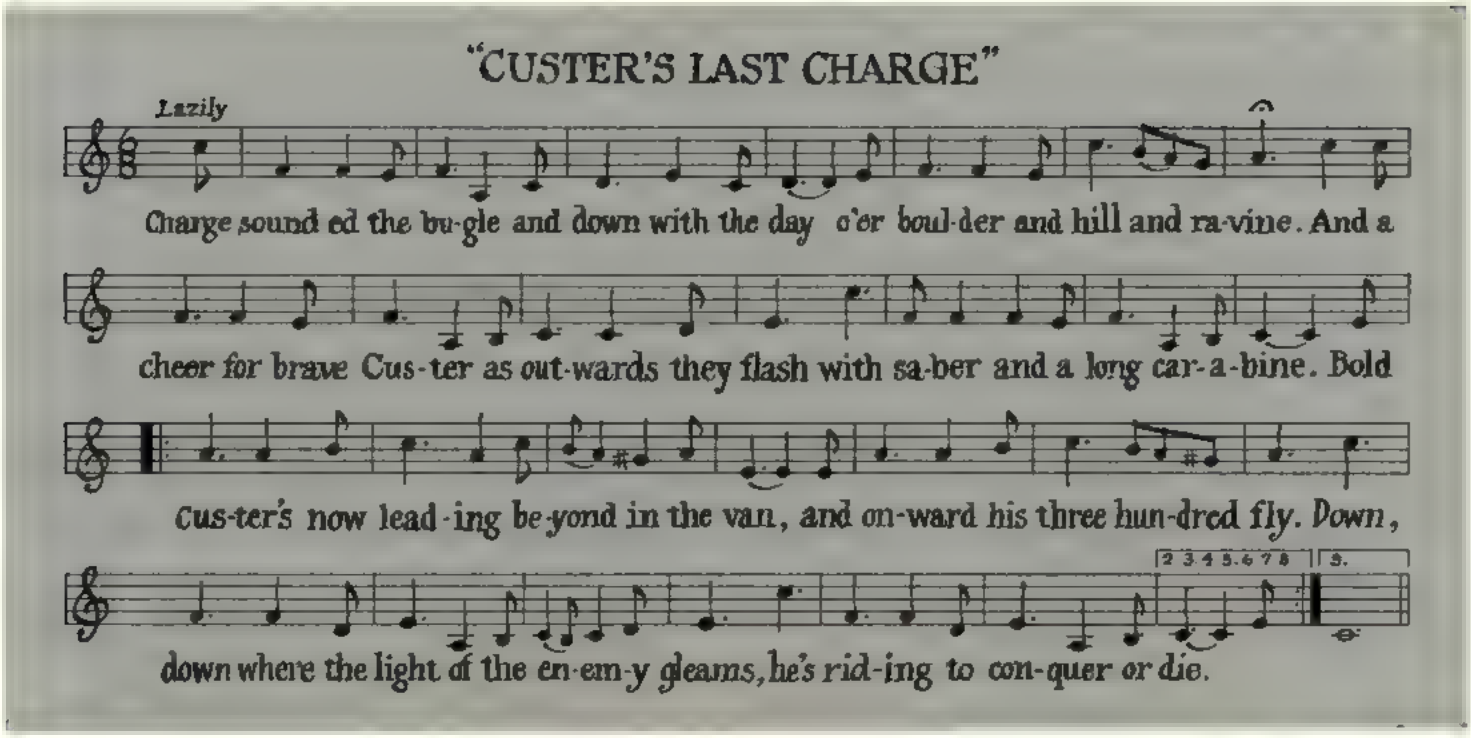
"Custer's Last Fight" was recorded by singer Jimmy Black on an otherwise unidentified 78 rpm commercial recording. It announces itself as a full-blown ballad but ends abruptly after the fourth stanza—a fate shared by many a ballad recorded in the era when songs simply had to be completed in three minutes and twenty seconds in order to fit on a ten-inch disc. The mood of this song is tragic and its general tone more realistic and closer to our notion of what folk music ought to be. It is hoped that someone will turn up a complete text.

Canyon. No one need ever be told there is only one Grand Canyon. If the conservation movement could not protect the Grand Canyon, then no lesser treasure of our natural geography could ever again be considered "safe."

The threat was in the form of two power dams proposed in a bill (HR4671) by Representative Morris Udall of Arizona, "Udall the Younger" in the Sierra Club's bestiary. Although neither dam would be located within the present national park, both were certain to affect large areas of the canyon. Bridge Canyon Dam, downriver, would back-flood 93 miles, including 13 miles of canyon along an edge of the park. Marble Gorge Dam, upriver, would flood 50 miles. Neither would be built primarily to conserve water (in fact, conservationists argue, they actually would *waste* water through evaporation). They would generate hydroelectric power that could presumably be sold to pay for irrigation projects in western Arizona.

One version of the ad was written by Howard Gossage of San Francisco, himself an imaginative foe of such conservation bugaboos as roadside billboards. It began: "If they can turn Grand Canyon into a 'cash register' is any national park safe? You know the answer." Farther down, a bold headline suggested: "Now Only You Can Save Grand Canyon from Being Flooded . . . for Profit."

There were no less than seven clip-and-mail coupons marching along the edge of the page — one each for the President, Secretary of Interior, Chairman of the House Committee on Interior and Insular Affairs, the reader's


"CUSTER'S LAST CHARGE"
Lazily
Charge sound ed the bu-gle and down with the day o'er boul-der and hill and ra-vine. And a
cheer for brave Cus-ter as out-wards they flash with sa-ber and a long car-a-bine. Bold
Cus-ter's now lead-ing be-yond in the van, and on-ward his three hun-dred fly. Down,
down where the light of the en-em-y gleams, he's rid-ing to con-quer or die.

Charge, sounded the bugle, and down with the day,
Over boulder and hill and ravine,
And a cheer for brave Custer, as outwards they flash
With saber and a long carabine.

Bold Custer's now leading beyond in the van
And onward his three hundred fly.
Down, down where the light of the enemy gleams
He is riding to conquer or die!

A gallant three hundred halted too late
What a terrible fate waits you there!
You're as proud as a tiger that roams o'er the wild
And you followed him home to his lair.

He stands now at bay and he springs to the fight
With the ire of his long smothered hate.
Oh, hear ye the yells swelling out on the wind
And now my brave souls 'tis too late.

Three thousand fierce Sioux swarmed around, bursting forth,
Their war cry resounds through the hills.
Its echoes are borne on the wings of the wind
As 'round the wide valley it shrills.

Ten demons to one, like tigers they fight,
Breaks the heart of each hero in blue
Ten bullets were aimed in the fierce battle tide
From the rifle of ten painted Sioux.

Yet boldly in front, yelling, Custer rides on,
O'er the rough trod and blood stained sod
'Til dropped by the hand of some more devil reds
He falls in the conflict, oh God!

He falls on the field and he breathes his last breath
'Neath the blue of the Montana sky
For the glory and fame of the stars and the stripes
He knew how to struggle and die.

In peace rest his ashes, his burial shroud be
That bonnie blue flag he loved well.
And until the last reveille up yonder shall sound
Until then, gallant Custer, farewell.

congressman and two senators, and the Sierra Club itself.

Another version was one of Brower's free-swinging "open letters" to Secretary Udall. Opening with an attack on the Bureau of Reclamation, which it accused of having a "compulsion to invade the National Park System and to kill wild rivers," it concluded with an exhortation to write letters to Washington and send a contribution to the club. On June 9, 1965, the ads ran in the *New York Times* and the *Washington Post*. To see which version had the better results, the club arranged for each paper to carry the Gossage ad in half its press run, the Brower ad in the rest.

Both ads brought in members. But the response of the Federal government was quicker. Within twenty-four hours after the ads had appeared, a messenger delivered to the club's San Francisco office a letter from Joseph Cullen, Regional Director of the Internal Revenue Service. It said, in effect, that the ads had cast doubt on the club's tax status. If the IRS should now determine by investigation that contributions to the club could not be deducted from individual income tax payments, the finding would be *retroactive* to June 9, the day the ads appeared.

Potential donors cooled off as surely as if the IRS had already ruled that gifts to the club would no longer be deductible. In spite of the financial pinch, there was a certain amount of grim satisfaction around the club office. As the monthly *Bulletin* said, the IRS, by allowing itself to be "drafted into the crusade to make the world

This additional "Custer's Last Charge" evokes the memory of the heroic Custer in stanzas which harken back to the "Charge of the Light Brigade." It was recorded by Edmund Cykler and sung by M. B. Hays of Burnsville, Oregon, who learned it from his father prior to 1887. Its metric perfection and sophisticated images suggest an author who knew what versifying was all about.

There is also a prissy sentimental song, "Valley of Custer," recorded at Safford, Arizona, in 1949, from the singing of Mrs. A. H. Baird, who says she learned it from the Hunt sisters in Salt Lake City.

There's a spot in the wildwood my heart longs to see
Where song birds heard them singing with laughter and glee.
There's a sweet daffodil and the primrose are seen
And the deer loves to sport on its mantle of green.

Refrain:
'Tis the valley of Custer, the park with the cluster
Of new log cabins spread out on the green.
'Tis the valley of Custer where oft we did muster
And drank to the brave from the soldiers' canteens.

Thus far the valley grows brightening and fair (?)
Now sleeps in the wildwood away from harsh cares
And fate was the toll on that terrible morn
When God called the roll on the Little Big Horn.
(Repeat refrain)

Finally, we give a unique stanza of "The Regular Army, Oh!," a long-time favorite among U.S. Army songs. The stanza could antedate the Little Big Horn tragedy and suggests that a search through printed collections of military songs might uncover ballads concerning Custer in his happier days.

We're marching off for Sitting Bull!
And this is the way we go
Forty miles a day, on beans and hay
With the regular army, O!

Ballad I: J. Frank Dobie, "Ballads and Songs of the Frontier Folk," *Texas and Southwestern Lore*: Publications of the Texas Folk-Lore Society, Vol. VI (1927), pp. 132-34. Fred High, *Old Old Songs*, privately printed at Berryville, Arkansas, n.d., pp. 7-8. Ethel and Chauncey Moore, *Ballads and Folk Songs of the Southwest*: Norman, University of Oklahoma Press, 1964, pp. 276-78.

Ballad II: Library of Congress LC 1899 LP. B. A. Botkin, *A Treasury of Western Folklore*: New York, Crown Publishers, 1951, pp. 745-46.

Ballad IV: John W. Crawford, *The Poet Scout*: San Francisco, H. Keller and Co., 1879, pp. 99-100.

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safe from (and expensive for) posy-pluckers," had subjected itself to an immediate bombardment of unfavorable comment.

The *New York Times*, whose editorial page director happens to be a director of the Sierra Club, called the procedure "new and thoroughly unfair . . . comparable to inflicting punishment before guilt is established . . . . Under the guise of strict tax regulation it is making an assault on the right of private citizens to protest effectively against wrongheaded public policies."

Other papers agreed. The *Oakland Tribune* called the letter "a chilling display of how the power of taxation can be turned to a punitive purpose." The *Pittsburgh Post-Gazette* asked: "Why are the ground rules different for some lobbying organizations such as chambers of commerce and labor unions?" And the *Seattle Times* commented: "The amount of money spent by various agencies of the Federal and other units of government to influence public opinion and legislation is incalculable. . . . This, in effect, pits the immense resources of the Federal treasury in the 'battle for men's minds' against such organizations as the Sierra Club, which draw limited finances from membership fees, contributions, and the sales of publications."

One of the few major papers in the country that sided with the IRS was the Phoenix *Arizona Republic*, which wants the dams built. Congressman Udall of Arizona let it be known that it was not he who had inspired the warning letter, though he obviously approved of it. In a speech to the House he ventilated his low opinion of the

"dishonest and inflammatory attacks against the Colorado River Basin Project Act." In his opinion, the ads were "phony . . . extremely misleading . . . deliberately and flagrantly misleading . . . inflammatory . . . replete with falsehoods and distortions . . . false . . . ridiculous wild . . . inflammatory . . . irresponsible . . . offensive . . . ill-conceived . . . utterly and completely false."

Among the falsities, Udall said, was a statement that the shoreline of the Grand Canyon reservoirs would fluctuate with hydroelectric demands. The club retorted: "According to the Bureau of Reclamation, one reservoir would fluctuate four vertical feet, the other, ten. . . . We hope the Congressman, who is less than nine feet tall, will never be caught wading in a 'constant' reservoir when its level rises ten feet."

If the letter of warning was intended to intimidate the club, it had quite an opposite effect. In July, the full-page ads reappeared in the *Times* and the *Post*. The club reprinted the ads in pamphlets, along with succulent morsels from the press.

"I don't think we would have done this solely as a gesture of defiance," says Hugh Nash, the director of publications. "But we did want to show we were not going to roll over and play dead."

In August, Gossage prepared a new ad, headlined "Should We Also Flood the Sistine Chapel So Tourists Can Get Nearer the Ceiling?" It ran in the *Wall Street Journal*, the *San Francisco Sunday Examiner & Chronicle*, *Scientific American*, *Harper's*, *Ramparts*, *National Review*, and *Saturday Review*.

"There is a bill in Congress to 'improve' Grand Canyon," the ad began. "Two dams will back up artificial lakes into 148 miles of canyon gorge. This will benefit tourists in power boats, it is argued, who will enjoy viewing the canyon wall more closely. . . . Submerged beneath the tourists will be part of the most revealing single page of earth's history. . . .

"There is no part of the wild Colorado River, the Grand Canyon's sculptor, that will not be maimed."

At the bottom was one of the familiar coupons, inviting a contribution to the club; but this time it stated that the club no longer could promise that a gift would be tax-deductible.

The Sierra Club, in spite of David Brower's compelling example, is not a monolithic organization. There is dissent, even within the board of directors, from the current policies. The apocalyptic language of the Sistine Chapel ad stirred nervous doubts.

Did this series of ads overstate the case against the dams? Did they give an impression — a deliberately misleading impression — that the reservoirs would totally inundate the familiar portions of Grand Canyon beloved by millions of visitors? What about the word "maim," which means to mutilate by cutting off a limb? Was that a fair description?

To a conservative minority within the Sierra Club, it appeared that Brower had become extravagant, even fanatical, and was alienating friends like Secretary Udall, who generally agrees with the policies of the organization. These conservatives sensed a note of irrationality in the current crusade. They felt uncomfortable with a large membership list, a huge annual budget, and a warehouse full of expensive books. They urged the club to pull in its horns and give more attention to outings and rock-climbs, new national parks in the Northwest, legislation to implement the Wilderness Act, and other constructive projects.

In truth, conservation issues are seldom black and white, and the position of the conservationists is not always rational. Recently, for example, the club opposed a projected atomic power plant at Nipoma Dunes on the coast of San Luis Obispo county in central California. After the Pacific Gas and Electric Company had agreed to give up the site and locate the plant in a nearby canyon, members of the club inspected the canyon and decided that its unique scenery, its foliage and animal life, might actually have been more valuable than the dunes.

At the moment, the Grand Canyon dams are stymied. The House Interior Committee did not move the bill, presumably because the proponents did not have enough votes to force it through the House. But the club has other causes to pursue: the Redwood National Park; a national park for the northern Cascades of Washington; the selection of wilderness areas and wild rivers. Brower undoubtedly will want to reach again for the vast audience of newspaper and magazine readers who are awakening to the dangers of technological developments. And there, of course, he will run into the threat

This is one of the series of advertisements that resulted in the Internal Revenue Service threat to the Sierra Club's tax-exempt status. It is here reprinted as a document, not as an advertisement. Just before Christmas, the IRS finally revoked the club's exemption.

The ad that caused the fuss . . .

SHOULD WE ALSO FLOOD THE SISTINE CHAPEL SO TOURISTS CAN GET NEARER THE CEILING?

EARTH began four billion years ago and Man two million. The Age of Technology, on the other hand, is hardly a hundred years old, and on our time chart we have been generous to give it even the little line we have.

It seems to us hasty, therefore, during this blip of time, for Man to think of directing his fascinating new tools toward altering irrevocably the forces which made him. Nonetheless, in these few brief years among three billion, wilderness has all but disappeared. And now these:

1) There is a bill in Congress to "improve" Grand Canyon. Two dams will back up artificial lakes into 148 miles of canyon gorge. This will benefit tourists in power boats, it is argued, who will enjoy viewing the canyon wall more closely. (See headline). Submerged underneath the tourists will be part of the most revealing single page of earth's history. The lakes will be as deep as 600 feet (deeper for example, than all but a handful of New York buildings are high) but in a century, silting will have replaced the water with that much mud, wall to wall.

There is no part of the wild Colorado River, the Grand Canyon's sculptor, that will not be maimed.

Tourist recreation, as a reason for the dams, is in fact an afterthought. The Bureau of Reclamation, which backs them, prefers to call the dams "cash registers." They are expected to make money by sale of commercial power.

They will not provide anyone with water.

2) In Northern California, four lumber companies are about to complete logging the private virgin redwood forests, an operation which to give you an idea of its size, has taken fifty years.

Soon, where nature's tallest living things have stood silently since the age of the dinosaurs, the extent of the cutting will make creation of a redwood national park absurd.

The companies have said tourists want only enough roadside trees for the snapping of photos. They offer to spare trees for this purpose, and not much more. The result will remind you of the places on your face you missed while you were shaving.

3) And up the Hudson, there are plans for a power complex —a plant, transmission lines, and a reservoir on top of Storm King Mountain—destroying one of the last wild and high and beautiful spots near New York City.

4) A proposal to flood a region in Alaska as large as Lake Erie would eliminate at once the breeding grounds of more wildlife than conservationists have preserved in history.

5) In San Francisco, real estate developers are day by day filling a bay that made the city famous, putting tract houses over the fill; and now there's a new idea—still more fill, enough for an air cargo terminal as big as Manhattan.

There exists today a mentality which can conceive such destruction, giving commerce as ample reason. For 74 years, the 40,000 member Sierra Club has opposed that mentality. But now, when even Grand Canyon can be threatened, we are at a critical moment in time.

This generation will decide if something untrammelled and free remains, as testimony we had love for those who follow.

We have been taking ads, therefore, asking people to write their Congressmen and Senators; Secretary of the Interior Stewart Udall; The President; and to send us funds to continue the battle. Thousands *have* written, but meanwhile, the Grand Canyon legislation has advanced out of committee and is at a crucial stage in Congress. More letters are needed and more money, to help fight a mentality that may decide Man no longer needs nature.*

David Brower, Executive Director
Sierra Club
Mills Tower, San Francisco

- ☐ Please send me more details on how I may help.
- ☐ Here is a donation of $_____ to continue your effort to keep the public informed.
- ☐ Send me "Time and the River Flowing," famous four color book which tells the complete story of Grand Canyon, and why T. Roosevelt said, "leave it as it is." ($25.00)
- ☐ Send me "The Last Redwoods" which tells the complete story of the opportunity as well as the destruction in the redwoods. ($17.50)
- ☐ I would like to be a member of the Sierra Club. Enclosed is $14.00 for entrance and first year's dues.

Name_____

Address_____

City_____ State_____ Zip____

*The previous ads, urging that readers exercise a constitutional right of petition, to save Grand Canyon, produced an unprecedented reaction by the Internal Revenue Service threatening our tax deductible status. IRS says the ads may be a "substantial" effort to "influence legislation." Undefined, these terms leave organizations like ours at the mercy of administrative whim. (The question has not been raised with any organizations that favor Grand Canyon dams.) So we cannot now promise that contributions you send us are deductible—pending results of what may be a long legal battle.

The Sierra Club, founded in 1892 by John Muir, is nonprofit, supported by people who, like Thoreau, believe "In wildness is the preservation of the world." The club's program is nationwide, includes wilderness trips, books and films—as well as such efforts as this to protect the remnant of wilderness in the Americas. There are now twenty chapters, branch offices in New York (Biltmore Hotel), Washington (Dupont Circle Building), Los Angeles (Auditorium Building), Albuquerque, Seattle, and main office in San Francisco.

of the Internal Revenue Service.

The Sierra Club's lawyers would like to force the government into a legal test to establish what the IRS means by saying an organization can lose its tax exemption if it spends a "substantial" amount to influence legislation. What does "substantial" mean? Is it 1% or 20%? The vagueness of the restriction inhibits many conservation organizations from *any* political activity and gives to the entire movement a quality of milk-soppish timidity.

In every way except financial, the Sierra Club has benefitted from its encounter with the revenuers; and it would not be surprising if the IRS heartily regretted its slap at the hard-nosed conservationists. Conservation, for all it has a stuffy sound, is a *good* word politically; taxation, an invariably *bad* one. Besides, "environment politics" is a growing force, especially in northern California, and men like David Brower are its ideological leaders.

Increasingly, the Sierra Club's books and brochures, its campaigns and conferences, are becoming the tools of a political movement. The movement is based on a paradoxical dogma, holding that civilization can be saved from imminent destruction only if wilderness places are saved from civilization. Thoreau's murky line, "In wilderness is the preservation of the world," is not merely a title for a book; it is the statement of a creed: preserve or perish. The "new conservation" even goes a step beyond Thoreau and Emerson, the reigning theologians of pantheistic transcendentalism, and introduces an element of religious eschatology into the old nature cult. Not only must man be saved by nature — he must be saved *immediately*, before the final hour, because nature itself is disappearing from the earth.

This dogma is hardly the traditional western attitude toward the out-of-doors. Our obsession has been to exploit the apparently unlimited natural resources of the West by irrigating wastelands, damming streams, cutting timber. Our political debates have centered on who would benefit from various proposed developments — not whether the development should take place at all.

The mystic, preservationist philosophy of the Sierra Club is directly opposed to the development-minded policies of many western businessmen and politicians. No matter what the Internal Revenue Service decides, there is bound to be a further confrontation between the would-be builders of power plants and lumber mills and the conservationists of this city-based club, with its splendid arsenal of books, speakers, and advertisements, all designed to change us from a breed of careless exploiters into contemplative, deep-breathing creatures, conscious of the unique value of our great open spaces and determined to defend them by every means.□

Diseños *continued*

mayor (five square leagues, or 22,000 acres) a little more or less, as the map attached to the file explains. The magistrate who gives possession shall cause it to be measured according to law, and the ownership of the surplus that may exist shall remain to the Nation for necessary uses.

4th. If he shall violate these conditions he shall forfeit his right to the land, and it may be denounced by another.

I consequently command that this title being held as firm and valid, a record thereof be made in the proper book, and it be delivered to the party interested, for his security and other ends.

Given in Monterey on the 24th of July 1841.

Juan B. Alvarado
Manuel Jimeno, Sec'y

A year later, Lt. Gonzalez directed a request to Justice of the Peace José Zenon Fernandez: "You will be pleased to proceed to give me the juridical possession of said tract and mark out to me its corresponding boundaries to said tract to be henceforth called *San Miguelito de la Trinidad,* in order that I may not encroach upon or prejudice my neighbors, nor they me . . ." Accordingly, Judge Fernandez set the fifth of October as the day for the ceremony, and sent notices to Francisco Rosas, representing the Mission establishment of San Antonio, and to Mariano Soberanes, owner of Rancho de Los Ojitos. At the same time, Judge Fernandez appointed the two *cordeleros,* or *measurers,* José Antonio Valencia and Bernabé Garcia.

This 5th day of October 1842, I, the aforesaid judge, being in the fields appertaining to the rancho entitled San Miguelito de la Trinidad, and the citizens José Rafael Gonzalez, owner of said rancho, Mariano Soberanes for himself, Francisco Rosas for the establishment of San Antonio, as neighboring proprietors, and José Antonio Valencia and Bernabé Garcia, the appointed measurers, all being present, ordered that the bounds and boundaries corresponding to said rancho be shown to me. Accordingly to make it the more clear, all being on horseback, a gap containing three large rocks divided between each other at some distance was pointed out to me

as being the boundary of the establishment of San Antonio. Thence the measurers after resuming their task, reviewing the line, and confirming their oath, stretched the measure on the ground in a southerly direction until reaching the foot of the range, where they crossed a river not included in the measurement. There were measured 99 *cordeles* [the *cordel* in this instance measures 50 *varas*, roughly 140 feet; 99 *cordeles* would thus be very close to a Mexican league of 5,000 *varas*, approximately 2.6 miles].

The summit of the range not having been reached on account of its steepness, the measurement of it being therefore impractible. From said point they returned to the first boundary, known as the *Portezuelo*, and having made it appear to me that the distance hence to the *Piedra del Gavilan* is a little over three leagues – which ground, owing to its ruggedness is too inconvenient to be measured, – they were all of the opinion, the measurers concurring, to draw a direct line from the Sierra in the West, which is found in the map marked by me with the letter A, passing by the *Portezuelo*, marked with the same letter, until reaching the *Piedras del Gavilan*, in an Easterly direction, marked with said letter.

Thence, drawing another line towards the South to the Sierra which runs from the Southeast to the Southwest, this boundary being the point marked in the map with the letter B; and thence running along the same Sierra in a westerly direction to the point marked with the letter C; thus completing the five sitios de ganado mayor, five square leagues which correspond and belong to Don José R. Gonzalez by grant made by the Government of the Department, subject to the approval of the Most Excellent Departmental Assembly.

Therefore, all of this being done with agreement and certain knowledge of the adjoining proprietors, and of the measurers, I ordered the aforesaid Gonzalez, to the end of making the said boundaries permanent and clear, to build at his cost and expense monuments of stone and lime over one *vara* high, on the spots mentioned and marked by me on the map with the letters A, B, C, in order that in all time they may be observed and regarded as limits and boundaries of his land by the residents contiguous thereto. And in order that it may appear as having been done, those who knew how to write signed with me, and I certify to the signatures of my assisting witnesses.

José Z. Fernandez José R. Gonzalez

All that remained was the ceremony of possession, which the Judge then proceeded to carry out:

On the Rancho San Miguelito de la Trinidad, at about 3 o'clock PM of the same day, month and year, Don José R. Gonzalez, then and there being accompanied by me, the aforesaid Judge, and witnesses with the intention as the said Gonzalez avowed, to take real and personal possession of the tract of land assigned to him and belonging to him by just title obtained from the Government of this Department, under date of 24th of July, 1841, his interest being subject to the approval of the Most Excellent Departmental Assembly, he entered and walked about thereon, uprooting grass, scattering handfuls of earth, tearing twigs, and performing other acts and ceremonies of real possession, as a token of having become the owner of the said land quietly and peaceably, without the least opposition from any of those present.

I, the Judge, do certify to having witnessed all that is here related, and command that the aforesaid Don José R. Gonzalez be henceforth held and recognized as the true lord and possessor of said land, giving, as I do give, testimony of all the aforesaid, and delivering the originals of these documents to him, the said party, as a voucher and preservation of his rights, agreeably to his petition; all of which being authorized in due form according to law.

Fernandez José Rafael Gonzalez

Lieutenant Gonzalez continued to live in Monterey, leaving the operation of the rancho to his son Mauricio. In 1850, William E. P. Hartnell compiled the property tax roll for Monterey County, and listed the belongings of the two:

7 leagues of land – all hilly [The original grant and the later confirmation in the U.S. courts were five leagues, 22,000 acres.]
2000 head of cattle
15 yoke of oxen
30 *yeguas* (mares)
24 *caballos* (saddle horses)
400 sheep
1 *casa de adobe y texa* (1 adobe house, tiled [roof] 22 v[varas])

Hartnell described the rancho as consisting principally of hills covered with oaks, with approximately 1200 acres of level pasture land and 300 acres under cultivation. At the prices of the time, the livestock on the ranch were worth about $25,000, and the land itself at least that much again. Thus it was an act of some generosity when in 1853, the elder Gonzalez sold the ranch and its contents to the younger for $30,000. The prosperity of the 1850's and the heavy demand for cattle brought wealth to Don Mauricio, and before the end of the decade he added half of the neighboring Rancho Los Ojitos to his holdings. The 1860's were another story, however. In May 1863, Don Mauricio signed a demand note for $11,257, with interest at 2 percent per month; in January 1864, the lender, D.R. Ashley, foreclosed. In 1877, Don Mauricio was reported to be driving an express wagon for a living.

When, by the terms of the Treaty of Guadalupe Hidalgo in 1848, the United States assumed sovereignty

John Read, an Irish sailor, settled in California about 1825. In 1834, he petitioned Governor Figueroa for the grant of Rancho Sausalito – shown on the diseño as "Land which Don Juan Read solicits, on the other side of the Port of San Francisco." The petition was refused, but later Read asked for Rancho Corte Madera del Presidio, including the Tiburon Peninsula. Read's diseño shows the northern half of San Francisco Bay, and the inclusion of soundings seems to suggest that the diseño was taken from a nautical chart which Read may have compiled earlier.

over California, she faced once more a problem that arose each time new territory was added to the country: how to determine and assure the already existing titles to real estate. As early as 1790, the secretary to the Governor of the Northwest Territory reported from Vincennes, on the Ohio River:

> The original concessions by the French and British commandants were generally made upon a small scrap of paper, which it has been customary to lodge in the notary's office, who has seldom kept any book of record, but committed the most important land concerns to loose sheets, which, in the process of time, have come into the possession of persons that have fraudulently destroyed them, or unacquainted with their consequence, innocently lost or trifled them away. . . . In one instance, and during the government of Mr. St. Ange here, a royal notary ran off with all the public papers in his possession, . . . and I am very sorry further to observe that, in the office of Mr. Le Grand, which continued from the year 1777 to 1788, and where should have been the vouchers for important land transactions, the records have been so falsified, and there is such gross fraud and forgery, as to invalidate all evidence and information which I might otherwise have acquired from his papers.

The situation was not quite that bad in California, but it was bad enough. Based in part on experience in the Northwest Territory (Ohio, Indiana, Illinois, and

Michigan), in Missouri, Louisiana, Mississippi, and Florida, the U.S. Congress in 1851 passed the Act to Settle Private Land Claims in California. There was to be an appointed Board of Land Commissioners, three men who would examine and pass on the validity of all claims to land based on the laws of Mexico. The decision of the Commission might be appealed to the U.S. District Court, and from there to the Supreme Court. As it worked out, each claimant was obliged to submit his claim to at least two tribunals, for in every case of a favorable decision by the Commission, the U.S. Law Agent directed an appeal to the District Court.

Cruz Cervantes probably had the worst time of all the claimants. He was one of the first to present his claim to the Board of Land Commissioners. Cervantes held title to two leagues of land in the foothills to the east of the present town of Hollister, in San Benito County. There was no question as to the authenticity of the documents in the case, but the U.S. Law Agent pointed out that Cervantes had not carried out two of the provisions specified by the Governor: Cervantes had not built a house on the property until four years after the date of the grant, although one year was the stated limit, and he had neglected to submit the grant to the Departmental Assembly for approval. The Law Agent argued that the lack of compliance rendered the grant forfeit. Not so, decided the Commission, pointing to the fifth provision of Cervantes' grant:

> 5. If he shall contravene these conditions, he shall lose his right to the land which may be denounced by any other person.

Commissioner Harry Thornton stated the view of the Commission. It held the terms of the grant clearly indicated that violation of any of the conditions simply made the grant forfeitable to another petitioner, but did not call for its reversion to the public domain. Since no one had taken advantage of Cervantes' oversight, the title must remain where it was.

The precedent established in *U.S. vs. Cervantes* was called upon again and again in later cases where one provision or another had not been carried out. But before Cruz Cervantes was through, he must have become heartily sick of the whole business. The Commission decided his case in December of 1852; in June of 1853 the United States entered an appeal in the U.S. District Court, where the Commission's decision was reversed. Cervantes' attorney, William Cary Jones, brother-in-law of John C. Frémont, took the reversal to the U.S. Supreme Court, and in May, 1854, the District Court's decision was reversed. But the Supreme Court also stated that the original reversal was issued in the Northern District Court, and that since the land lay south of the 37th degree of latitude, the decision should have come from the Southern District Court, where the case was forthwith remanded. The southern Court upheld the original decision favoring Cervantes, but once again the United States appealed the case to the Supreme Court, where Cervantes' claim was finally, for the last time, upheld on May 12, 1856.

Whether Cervantes triumphed in a practical sense is doubtful. Hartnell's tax roll lists him in 1850 as having 300 head of cattle, 2 yoke of oxen, 4 mares, 100 sheep, 5 saddle horses, and an adobe house with a shingle roof valued at $1,000. This is hardly the kind of fortune to carry a person through five trials. Cervantes' fate, like that of Mauricio Gonzalez, was duplicated time and again in California.

There were few indeed who weathered the change in culture, language, and economy that took place after 1850. Fate was no kinder to the foreigners than to the natives; John Sutter and Jacob Primer Leese saw their once-great holdings swept away, just as Cruz Cervantes and Mauricio Gonzalez had. Only the very shrewd or the very lucky survived. □

The original land documents of the Mexican government in California are presently in the U.S. National Archives. Transcribed copies are contained in the records of the U.S. District Court, now in the care of the Bancroft Library; transcripts and translations are also in the California State Archives in Sacramento.

Descriptions of the land granting procedure may be consulted in W. W. Robinson's *Land in California*, University of California Press, 1948; in Robert Glass Cleland's *The Cattle on a Thousand Hills*, The Huntington Library, 1951; in William Carey Jones' *Report*, Senate Executive Document No. 18, 31st Congress, 2d Session, serial 589; and in Henry W. Halleck's *Report on the Laws and Regulations Relative to Grants or Sales of Land in California*, House Executive Document No. 17, pp. 118-182, 31st Congress, 1st Session, serial 573. Winthrop Sargent's description of Vincennes is printed in *American State Papers*, Class VIII, Public Lands, Vol. I, pp. 9-17.

Manuscript sources other than the land grant papers themselves include William E. P. Hartnell's "List of Property Owners of Monterey County, May-August 1850," in Mariano Guadalupe Vallejo's *Documentos para la Historia de California*, Vol. 35, pp. 373-490 and the *Gonzalez Family Papers*, both in the Bancroft Library. Other source material is listed in my *Diseños of California Ranchos* (Book Club of California, 1964), which also discusses the granting procedures and the nature of the ranchos themselves.

The Western History Association will sponsor a session on "Progressivism in the West" during the annual meeting of the Organization of American Historians, Chicago, April 27-30, 1967. Members and friends are urged to attend.

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Western urbanity: the definitive cable car, crowning glory of the Age of Traction. . . . When an amateur photographer with a sense of timing froze this moment in silver nitrate, Montgomery Street brokers, awash in Pisco Punch and nearly foundered with free lunch, could grow misty-eyed with memories of the golden years of the Comstock. ". . . Oh, when will they give us another Ophir deal? When will they give us another Con-Virginia?"

(Photo from the Walter A. Muhlmann Collection, San Francisco Maritime Museum. Photographer unidentified; date, about 1905.)

RANCHO SAN MIGUELITO DE LA TRINIDAD

A diseño showing the 22,136-acre rancho near Mission San Antonio (about sixty miles southeast of Monterey, California) granted to José Rafael Gonzales in 1841.

Key:
(as transcribed and translated from the papers of the U.S. Land Commission):

1.	Playa	Beach [beyond the mountains]
2.	Camino para la playa	Road leading to the beach [Nacimiento Road]
3.	Sierra	Ridge of mountains [the Santa Lucias]
4.	Rio de la Sierra	Mountain River [Nacimiento]
5.	Ojo de Agua del Gavilán	Gavilan [Hawk] Spring
6.	Arroyo del Gavilán	Gavilan [Hawk] Creek
7.	Camino de S. Carpoforo	Trail to San Carpoforo Creek [also known as the San Carpojo Trail]
8.	Piedras del Gavilán	Rocks of the Hawk
9.	Camino para el rancho del Piojo	Road leading to Rancho El Piojo
10.	id. para el S. Miguelito	Road leading to S. Miguelito
11.	Rancho de San Miguelito	
14.	Tierra de riego	Irrigable land
15.	Casa de Marcelo	Marcelo's house
16.	Lomas muertas	Low hills
17.	Ydem del Benado	Hills of the deer [Venado]
18.	Piedras del Portezuelo	Rocks of the small pass
19.	Cañada de las Piedras	Stony Valley
20.	Arroyo de las Piedras	Stony Creek [also known as Piedra Creek]
21.	Cañada del Rancho	Valley of the Rancho
22.	Atajada de Borregos	Sheep fold
23.	Arroyo de la Ciénega	Swamp Creek
25.	Ojo de Agua	Spring
26.	Surco de Agua de la Ciénega	Mouth of the Swamp [Swamp Creek]

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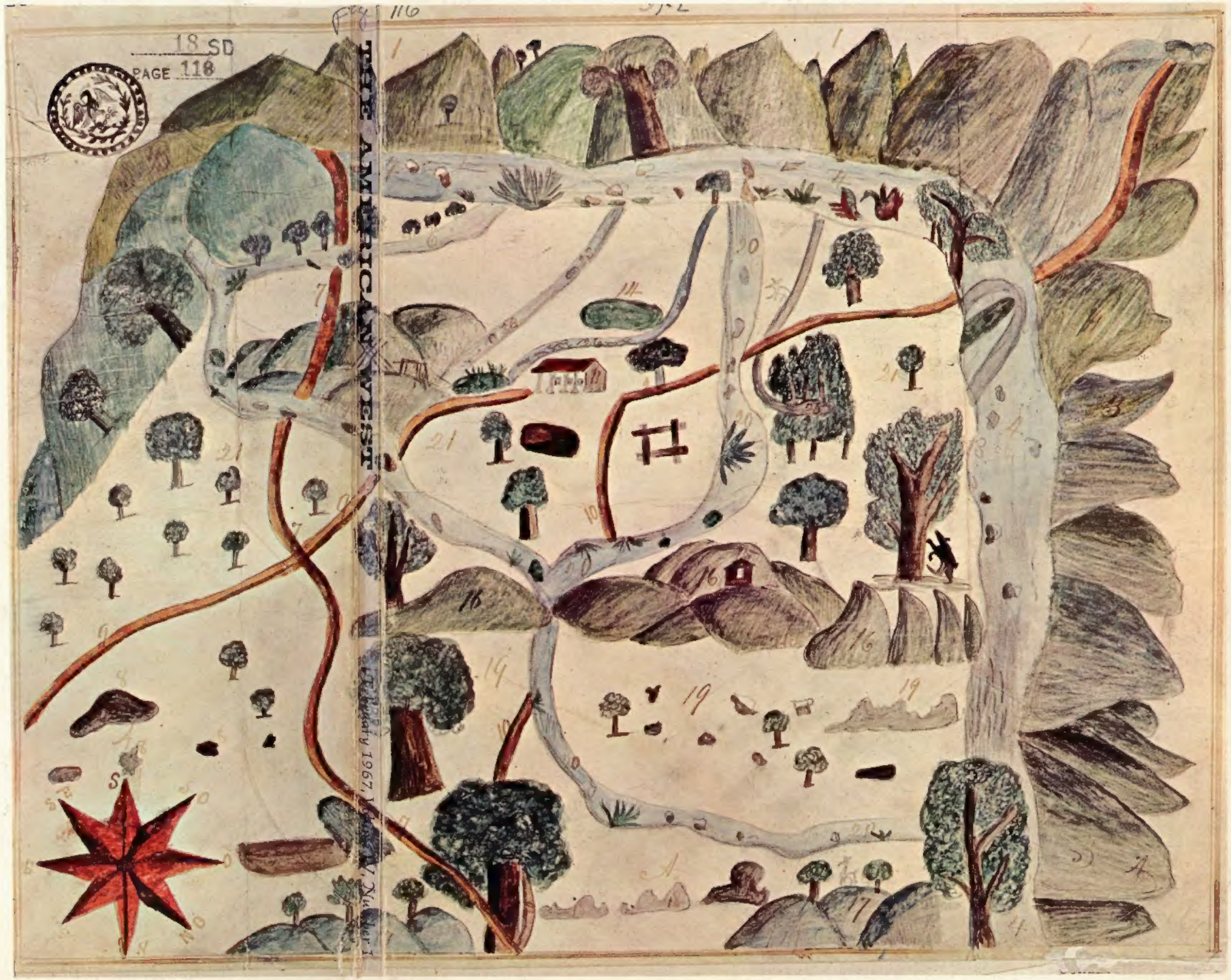
1. Playa	Beach [beyond the mountains]
2. Camino para la playa	Road leading to the beach [Nacimiento Road]
3. Sierra	Ridge of mountains [the Santa Lucias]
4. Rio de la Sierra	Mountain River [Nacimiento]
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